

Technology Supported Formative Peer Assessment: An Examination of Student Perceptions in the  
Development of Employability Skills

by

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A Project Submitted in Partial Fulfillment  
of the Requirements for the Degree of

Masters of Education in Digital Technologies

in

The Faculty of Education

University of Ontario Institute of Technology

July 2014

# PEER ASSESSMENT OF EMPLOYABILITY SKILLS

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**Abstract**

With the growing need for post-secondary education to develop students' employability skills, educators often create authentic learning environments that require authentic assessments. Peer assessment has been used successfully in a variety of higher education contexts and disciplines and has proven to positively impact learning, particularly when used in a formative fashion. It does, however, present administrative challenges for instructors. This research project examined student perceptions of the use of formative peer assessment in the development of employability skills and investigated the use of a discussion forum in Desire2Learn to facilitate the process. Third year legal studies students at a mid-sized college participated in the project and viewed peer assessment as a positive learning experience. There was a high level of acceptance of peer assessment being a fair way to grade an individual's contribution to a group project. In addition, there was a noticeable increase in student confidence levels in both their ability and their peers' ability to provide feedback. Students preferred using an online tool to submit and access peer feedback, and there was a substantial savings of time with respect to managing the process as compared to a previous iteration of peer assessment used by the researcher.

### **Peer Assessment of Employability Skills**

Ontario's public colleges play an important role in the post-secondary education scheme. Originally established in 1965 to serve local communities, colleges were created to bridge the educational gap that existed for those who had needs beyond the secondary school system, but who chose not to pursue a university education (Watson, 1971). While universities functioned primarily as teaching institutions and research facilities, colleges were more narrowly focused on preparing individuals for employment (Clark, Moran, Skolnik, & Trick, 2009). Almost 50 years later, Ontario's colleges have undergone significant transformation. Though they still serve the communities in which they exist, their reach extends beyond community borders to serve students provincially, nationally, and internationally. The range of credentials that can be earned at colleges has expanded to include post-graduate certificates and applied degrees. Partnerships with industry have created corporate training and research functions, and partnerships with universities have resulted in greater accessibility to higher education (Colleges Ontario, 2013; Durham College, 2013). Yet, through all of this change and transformation, the focus of a college education, whether a certificate, diploma, or degree, has remained—developing individuals who possess the skills to secure and maintain employment in workplace environments that are ever changing (Ministry of Training, Colleges and Universities, [MTCU] 2005). This focus is in large part responsible for my desire to pursue a research project directed at the development of employability skills.

My motivation for designing and implementing learning that is experiential and collaborative was influenced primarily by my own personal experience, both as a learner in a post-secondary environment and as an employee in the workplace. With respect to my formal education, I experienced traditional post-secondary education at both the college and undergraduate university level. In terms of my informal education, I experienced a wide range

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of professional development workshops, seminars, and conference sessions. Apart from targeted training that was meant to enhance the technical skills required to meet my employment responsibilities, the bulk of my learning—whether formal or informal—occurred as a result of trial and error, reflection and correction, and observing and modeling professionals in my field. In reflecting on all of those learning experiences, the ones that taught me the most valuable and enduring lessons were those that demanded that I perform in a real world context with real world consequences. Because of this, I seek to replicate those experiences in my practice as a full-time college instructor in a legal studies program, and I am guided by the principles and assumptions that underlie adult learning theory or andragogy. I am fortunate to teach courses where my approach to learning compliments today’s demand for students to have a diverse skill set.

The need to focus higher education on employability skills is formally recognized through program standards and curricula (MTCU, 2005), educational frameworks (Partnership for 21<sup>st</sup> Century Skills, 2007), and industry research (Bloom & Kitagawa, 1999). Essential employability skills (EES) are articulated in all Ontario college program standards published by the MTCU (2005), and are defined as “skills that, regardless of a student’s program or discipline, are critical for success in the workplace, in day-to-day living and for lifelong learning” (p. 15). They include communication, numeracy, critical thinking and problem solving, information management, interpersonal, and personal skills. Each of these skill categories is further articulated; for example, interpersonal skills include teamwork, relationship management, conflict resolution, leadership, and networking abilities. According to the Conference Board of Canada’s Employability Skills 2000+ profile (Bloom & Kitagawa, 1999), such skills can be classified as follows: fundamental—those that are needed as a basis for further development; personal management—those that drive one’s potential for growth; and team work skills—those that are needed to contribute productively to a team or project. With the need for employability

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skills firmly established by business, industry, and research, and with colleges responding to the need through clearly established EES learning outcomes, educators are faced with the question of how best to structure learning environments and evaluations for these often subjective skills areas.

One way to address this is to create authentic learning opportunities and assessments that simulate experiences students are likely to encounter in their work environments. Wiggins (1989) characterized authentic assessment as evaluations that are challenging, complex, and contextualized that require collaborating with others and exercising judgment against pre-determined criteria. Sluijsman, Dochy, & Moerkerke, (1999) supported the need for authentic assessment noting that “assessment practices might be more defensible if they could bear some relationship to the ways in which...professional work is assessed in actual working environments and the situation in which knowledge is used” (p. 311). Group- or team-based learning affords educators the opportunity to create authentic learning environments and assessments, and peer assessment has been used in such learning environments in a variety of disciplines and contexts (Gielen, Dochy, & Onghena, 2011). Peer assessment has been credited with improving student engagement, domain-specific knowledge, and learning outcomes (vanZundert, Sluijsman, & van Merriënboer, 2010; Willey & Gardner, 2009), increasing student confidence (Vickerman, 2009), and developing judgment skills (Topping, 2009). Using peer assessment to evaluate group processes and the behaviours and contributions of group members can help support the development of employability skills (Tillema, Leenknecht, & Segers, 2011). However, Wiggins (1989) acknowledged that authentic assessment is not without its challenges, and Lombardi (2008) identified several barriers to implementation such as the time required to monitor and instruct students, particularly in classes with large enrolments that are typical in higher education. In addition, research concludes that having frequent cycles of assessment and

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qualitative feedback as part of the peer assessment process is critical to its effectiveness (Liu & Carless, 2006; Luxton-Reilly, 2009; Sluijsman et al., 1999; Tillema et al., 2011; Willey & Gardner, 2010) yet these features present teachers with administrative challenges. Attempting to collect, share, and manage the volume of information generated by peer assessment without an effective mechanism to facilitate it, may lead teachers to avoid peer assessment altogether or rely on peer assessment tools and processes that lack the qualities that make them effective (Luxton-Reilly, 2009). Several web-based peer assessment tools have been developed for grading a specific product and some have been created for use in group and team based learning, but there are far fewer of these types of tools and a corresponding lack of research on their use and value in education (Luxton-Reilly, 2009).

This research paper explores the use of peer assessment in the context of a complex and innovative course evaluation model. More specifically, it examines third year student perceptions of the value/usefulness of technology supported formative peer assessment in the development of employability skills. In addition, it considers the use of a standard higher education Learning Management System (LMS) to facilitate the peer assessment process.

## **Literature Review**

In addition to examining the theoretical framework for the research, this section will also provide background information for decisions that were made regarding the peer assessment tool and process utilized for the project.

### **Theoretical Framework**

Malcom Knowles, considered by many to be the father of andragogy, suggested that learning is a process where the learner is at the center of the process and the teacher is on the periphery, providing guidance and resources as appropriate (1977). Those who subscribe to andragogy accept that there is an “obligation to do everything one can to help a learner become increasingly self-directive in his or her learning” (Knowles, 1977, p. 207). Knowles articulated a number of underlying assumptions about adult learners distinct from the assumptions upon which the education of children, pedagogy, had been predicated. These include a learner’s need to know why they are learning what they are learning, their concept of self, prior experiences they bring to the learning environment, their readiness to learn, their orientation to learning, and their motivation to learn (Knowles, 1984). A common theme to these assumptions is the context dependent nature of adult learning. In essence, adults move towards learning that is relevant and performance based as their need for education/learning is often driven by the practicalities of their lives. This can include everything from acquiring skills and knowledge for their career, to managing the challenges and problems they face in navigating their day to day lives (Knowles, 1977).

The concepts and themes inherent in andragogy are in keeping with the original focus of a college education: preparing individuals for employment. A wide range of instructional

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theories and strategies have evolved and been employed in an effort to address the different needs of adult learners. These include but are not limited to active, cooperative, problem-based, situated, collaborative, and experiential learning. While these approaches to education are not new, they are becoming increasingly popular as governments, post-secondary institutions, and adult educators recognize that in order to be successful and competitive, students must possess both the technical skills and knowledge specific to their profession, and the transferable skills and knowledge required to interact effectively with co-workers, think critically, and solve problems (Bloom & Kitagawa, 1999; Government of Ontario, 2012; Sluijsman et al., 1999; Tillema et al., 2011). Experiential and collaborative learning offer the potential to support the development of both the vocational and transferable skills colleges seek to cultivate in students.

Experiential learning is defined as “a philosophy and methodology in which educators purposefully engage with students in direct experience and focused reflection in order to increase knowledge, develop skills, and clarify values” (Association for Experiential Education, n.d.). As I will illustrate below, the benefits of experiential learning are well documented in the literature. In addition to increasing student engagement and motivation which often leads to better retention of subject matter, experiential learning can provide real world context in a safe environment that does not exact real world consequences, thus facilitating the transition from classroom to workplace (Lee, 2008; Marlin-Bennett, 2002; Millenbah & Millspaugh, 2003; Wright, 2000). Collaborative learning requires students to go beyond merely working together to achieve a specific task or goal. It “means that students are responsible for one another's learning as well as their own and that reaching the goal implies that students have helped each other to understand and learn” (Dooly, 2008, p. 21). Collaborative learning has been reported to produce many of the same academic benefits as experiential learning but offers additional social benefits. These include developing better interpersonal relationships, identifying and addressing

gaps in learning with the support of peers, and improved confidence levels as a result of problem solving through discussion (Herkert, 1997; Liao, 2014; Willey & Gardner, 2012).

With different approaches to learning come challenges, and in moving away from individual learning and towards learning that is collaborative, implementing assessments that reflect this collaboration is needed (Tillema et al., 2011). Peer assessment helps foster a student centered, performance based approach to learning that encourages student interaction (Beaman, 1998) and is in keeping with the goals and benefits of experiential and collaborative learning noted above.

### **The Case for Peer Assessment: Opportunities and Challenges**

Topping (2009) defines peer assessment as “an arrangement for learners to consider and specify the level, value, or quality, of a product or performance of other equal-status learners” (p. 21). According to Luxton-Reilly (2009), peer assessment is not new and in fact, has been in use in education for over 50 years. Peer assessment has been shown to have a positive impact on learning (Topping, 1998) and a wide range of benefits related to the use of peer assessment is well documented in the literature. Some of these benefits include increased team cooperation and commitment, improved professional skill development, greater student engagement (e.g., Willey & Gardner, 2009; Willey & Gardner, 2010), enhanced subject knowledge, increased learner autonomy (Vickerman, 2009), more effective learning and reduced teacher workload (Rushton, Ramsey & Rada, 1993). In addition, it has been shown to provide teachers with a more accurate assessment of how group members perform (Cheng & Warren, 2000) than simply grading the finished product of a group effort.

Working in groups provides students with opportunities to demonstrate employability skills and behaviours; however, assessing those skills and behaviours can be challenging because

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it involves a degree of subjectivity, requires an opportunity to observe individuals in the midst of performing their tasks over a period of time, and demands an ability to make judgments about performance against established criteria (Tillema et al., 2011). Peer assessment positions students to look critically at themselves in the context of working in a group and to learn from the feedback of others (Sluijsman et al., 1999). Effective employment performance reviews incorporate feedback from multiple raters (e.g., supervisors, co-workers, clients) and occur at regular intervals so that the information gathered can be used to effect performance improvements (McShane, 2006). Thus, peer assessment reflects how students will be evaluated in their careers in an authentic manner and is well suited to collaborative environments (Liu & Carless, 2006; Sluijsman et al., 1999; van Zundert et al., 2009).

Evidence suggests the feedback element of peer assessment is the most valuable to student learning, lending support to using peer assessment formatively (Liu & Carless, 2006; Sluijsman et al., 1999; Topping, 2009 and Xiao & Lucking, 2008). Vickerman (2009) and Welsh (2012) noted that students preferred peer assessment to be used formatively and to involve both written feedback and opportunities for discussion to be of value. Based on my review, there appears to be limited research on student perceptions of formative peer assessment's impact on the development of essential employability skills.

A number of studies involving peer assessment have been conducted to confirm the validity and reliability of grades arrived at by peers versus expert markers (Bastick, 1999; De Graz, L., Valcke, M., & Roozen, I., 2012; De Wever, B., Van Keer, H., Schellens, T., & Valcke, M., 2011; Falchikov & Goldfinch, 2000; Pare & Joordens, 2008; Ryan, Marshall, Porter, & Jia, 2007; Xiao, Y. & Lucking, R., 2008). The focus of such research is the grading of a product such as a piece of writing, an oral presentation, or a design project and rarely addresses assessment of the interpersonal dynamics of working in a group. In an attempt to address grade

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validity and reliability concerns in a group setting, some scholars have sought to determine how best to assess an individual's contribution to a group project using peer assessment (Baker, 2008; Cheng & Warren, 2000; Fellenz, 2006; Freeman, 1995; Jin, 2012; Johnston & Miles, 2004; Kench, Field, Agudera, & Gill, 2009). This work has resulted in useful guidelines for teachers utilizing teams to produce a specific artifact that must be graded, but although assessing the product of a group effort can be important, assessing the skills and behaviours demonstrated while working in the context of a group helps support student learning and address essential employability skills in a more concrete way (Tillema et al., 2011; van Zundert et al., 2010; Willey & Gardner, 2010). In addition, the motivation for some educators in using peer assessment is to develop interpersonal skills and higher order thinking skills such as critical thinking and problem solving. Rather than questioning the validity of grades from peers versus experts, examining how students use insights from peer feedback to improve their skills, question their perceptions and solve problems would be a more relevant exercise for those who value assessment for learning (Tillema et al., 2011).

### **Meeting the Challenge: Design and Technology**

Many of the concerns associated with the use of peer assessment such as the perceived fairness and accuracy of grading, the ability of students to interpret and apply grading systems and provide qualitative feedback, and student commitment to the process can be addressed by involving students in the design of the assessment, providing training and exemplars, ensuring that qualitative feedback exists, and supporting the process with discussion and guidance (Liu & Carless, 2006; Luxton-Reilly, 2009; Ploegh, Tillema, & Segers, 2009; Sluijsman, et al., 1999; Tillema et al., 2011; Willey & Gardner, 2010). Students who work closely with each other often have more knowledge than the teacher of how each person in the group performed and are thus

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well positioned to provide specific, qualitative feedback (Boud, 1986; Cheng & Warren, 2000; Fellenz, 2006).

Though careful design can address some peer assessment concerns, other concerns such as working with large class sizes, having frequent cycles of assessment, sharing qualitative comments (Liu & Carless, 2006; Vickerman, 2009; Welsh, 2012) and giving peer assessors anonymity (Thompson & McGregor, 2009; Pare & Joordens, 2008) present challenges that cannot be as readily addressed (Luxton-Reilly, 2009; Pare & Joordens, 2008). As illustrated below, researchers have used technology in an attempt to meet these challenges in some disciplines and contexts (Luxton-Reilly, 2009; Pare & Joordens, 2008; Willey & Gardner, 2009; Willey & Gardner, 2010).

In his review of online tools that support peer assessment, Luxton-Reilly (2009) noted that even though there were a number of tools available and some were highly configurable, the majority were created by instructors in computer science for use in computer science courses (Luxton-Reilly, 2009) making them inaccessible to other disciplines. Most were used to evaluate specific artifacts with little to no focus or emphasis on group work processes and qualitative feedback making them inappropriate for assessing the group process and employability skills that are the focus of this study (see p. 6). The context and discipline specific nature of many of these tools limit the scope of available research (Hamer, et al., 2011; Luxton-Reilly, 2009) and suggest that further innovation and research are required to find and implement tools that are user-friendly and adaptable across disciplines and contexts (Luxton-Reilly, 2009).

### Summary

Adult learners want learning experiences that are relevant to their needs and they bring a wealth of experiences with them to the learning environment. Experiential and collaborative learning offer adult learners the chance to integrate their experiences and engage actively with their peers in real world contexts. These more active learning strategies demand authentic assessments that help adult learners develop employability skills to support the transition of the adult learner from the classroom to the workplace. Peer assessment has proven to be a worthwhile and meaningful assessment tool for students working in teams and groups. Gaps in the literature suggest that there is room for further exploration of the use of formative peer assessment in higher education, particularly in the context of working in groups. Additionally, most of the literature focuses on grading an artifact, such as an essay versus assessing less easily quantified employability skills and behaviours such as initiative, teamwork, reliability, and problem solving. Finally, there is limited information available on technology to support the peer assessment process that is not domain or context specific. The aim of this research project was to determine whether or not students perceived formative peer assessment facilitated via a LMS as contributing to the development of essential employability skills. A further aim of this project was to evaluate a web-based peer assessment tool that was neither context nor discipline specific. The following questions were used to guide this research project.

1. What influence does technology supported formative peer assessment have on student perceptions of the value of peer assessment:
  - a. in the development of employability skills?
  - b. to their learning?
2. What impact does utilizing an online tool have on the process of collecting data and administering the peer assessment process for teachers?

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3. How does utilizing an online tool influence student participation and perceptions of the peer assessment process?
4. How does utilizing an LMS influence student participation in discussions in support of the peer assessment process?

## **Method**

### **Context of Study – Course & Students**

This study was conducted with students taking a three-year legal studies advanced diploma program at a public community college in Southern Ontario. In the final semester of the program, students are required to take a career preparation course that is focused on organizational communications and behaviour. It is a 14-week, 42 hour course delivered in the context of a traditional, face-to-face classroom setting; however, the course itself is not a traditional lecture format. Students attend a full complement of classes over a three-day compressed school week followed by two days of field placement. By the time students enter the career preparation course, they have completed over 200 hours of field placement in a legal environment under the direct supervision of legal professionals. Legal environments include everything from law firms, banks, and insurance companies to provincial courts and municipal legal departments. Legal professionals may include lawyers, paralegals, law clerks, and legal assistants. In addition, students have experienced peer assessment in a summative fashion in a communications course I teach them in the first year of their program where they are required to work in small groups to make a presentation supported by a written report.

The class is structured to simulate an organization and I, as their professor, function as the manager while the students function as employees. There are 13 committees, ranging in size from three to five students, which work together to plan, organize and stage two events over a four month period. The first event is a career fair that brings potential employers on campus for recruiting and networking purposes; it occurs at week eight of the semester. The second event is an appreciation luncheon for employers who have provided field placement opportunities; it occurs at week 13 of the semester. Committee work involves participating in a wide range of activities such as coordinating and attending team meetings, completing weekly reports,

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communicating both inside and outside of the classroom, interacting with external partners, and completing tasks specific to the team's purpose. Some teams are responsible for the production of a product such as a resumé booklet for employers or job resource booklet for classmates.

Some teams are responsible for the completion of a task such as raising funds or recruiting a guest speaker.

Students are invited to apply for positions on various committees, (e.g., budget, catering, registration) by submitting their resumé to me with a list of their top three committee choices in rank order. A number of factors are considered when placing students on committees including whether or not they submitted a resumé (while a majority of students submit a resumé, some do not), the skills required for the committee, the number of people required for the committee, and student friendships in an attempt to ensure that students have at least one person on their committee they feel comfortable working with. For example, if Student A applies for the budget committee and has related experience, they will secure a position on the committee. If Student B does not submit a resumé but is friends with Student A, that student may be considered for the budget committee if there is a position available. As a result, some committees have members who are very familiar and comfortable with each other while others may have members who have never worked together before, not unlike a work environment. In almost all cases, each student has at least one person on their committee who they have worked with previously. This process takes place prior to the start of the semester and students are informed via email of their committee placement before formal classes begin. The committees remain in place and must function for the entire 14-week semester. The course has both individual and group assessments. Though participation in the study was voluntary, participation in the peer assessment process was not voluntary as providing professional feedback to peers is an important part of the learning

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experience in this course. Peer assessment accounted for 10% of each student's term grade with other committee work accounting for 20%.

### **Context of Study – Researcher/Teacher**

I have taught at the post-secondary level for 15 years and have worked exclusively with the students in this justice studies program for 13 years. I teach all four of the communications courses in the program and one introductory law course. By the time students register for the legal career preparation course, they have been taught and evaluated by me in four courses over a two-year period. I am comfortable using technology in the classroom and I am a relatively robust user of the Learning Management System (LMS) utilizing it to post material (text, video, web links), make announcements, conduct online quizzes, post grades, send email, create rubrics, and accept assignment submissions. However, I had very little experience using the Discussion Forum prior to this project. In addition, the college had only recently switched from WebCT to Desire2Learn (D2L) giving me approximately 18 months of experience working in the D2L environment. The college had an excellent faculty innovation centre with two full-time D2L support people who were readily available to me should their expertise be required.

### **Participant Recruitment**

A total of 50 students were registered for the career preparation course. Students were informed of the study in-person and electronically via email and via D2L. In-person contact occurred in November 2013 during a voluntary information session and again in January 2014 during the first week of classes. Electronic contact occurred via email and via the News Tool and Content Modules in D2L the first week of January 2014. If students have their course notifications set up in D2L, they receive instant messages when a news item is posted in the

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News Tool. Courses in D2L are typically accessible to students one week prior to the start of the semester. All students were invited to participate in the study and participation was voluntary. Students were randomly assigned a Student Identification Code (SIC) at the beginning of the course via a card inside a sealed envelope to allow students to maintain anonymity. Once students opened their envelopes, they were asked to record their SIC in a secure location, place the card in a new envelope, seal the envelope, and sign their name across the seal. The SICs were collected and retained by me, and in the event a student forgot the SIC at any time during the semester, the envelope could be returned while maintaining their anonymity. The SIC was used for the pre- and post-course surveys and for online discussions.

### **Peer Assessment – Content & Cycle**

Students received one hour of formal instruction related to performance assessment practices in professional work environments and participated in the design of the peer assessment tool that was used in the course. Performance assessment practices discussed included Management by Objectives, 360 Degree Feedback, and Behaviourally Anchored Rating Scales. Peer assessment tool design was facilitated through an in-class activity where students were instructed to develop five criteria related to employability skills and a ratings scale with rating descriptors. Students were provided with the Ministry of Training, Colleges and Universities' definition of employability skills. The tool design followed industry related performance evaluation systems that are based on Behaviourally Anchored Ratings Scales (Smith & Kendall, 1963). Students worked in their designated committees for a period of one hour which was followed by 30 minutes of discussion. I gathered all of the committees' suggestions, reviewed the criteria for common themes and the scales and descriptors for common features, and drafted a peer assessment tool. The draft was circulated to all students and discussed in class prior to

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being confirmed for the peer assessment process, giving students the opportunity to decide if the tool adequately addressed their input from the class work session. In addition to the employability skills criteria, there were two comment sections on the tool. One section required students to make a comment relating to something positive team members were doing and one section required students to make a constructive comment to help team members improve their employability skills (Appendix A). The peer assessment tool contained features such as drop down menus for quick and easy ratings to be entered and was saved as a Word document. A student's ratings were averaged to arrive at a grade for each student.

The peer assessment process required each student to complete the peer assessment tool for each of their committee members. Peer assessment took place at weeks four, eight, and twelve of the semester for a total of three assessments over the 14-week period.

### **Peer Assessment - Process**

It was my goal to use a tool that would allow students to complete the peer assessments anonymously, submit them electronically, and access them independent of me. D2L did not have a peer assessment tool that met my requirements and after consulting D2L support staff on campus, we determined that the only feature that could meet my requirements was the Discussion Forum.

First, each committee member was enrolled in a group within D2L (see Figure 1). Next, a Discussion Forum was created for the peer assessment. Within each forum, students were added as Discussion Topics (see Figure 2). Thus, there were 50 Discussion Topics within each forum. D2L allows a Discussion Topic to be restricted to specific groups; in this manner, I could place students (a.k.a. Discussion Topics) together so that they only had access to members of

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their committee (see Figure 3). This process only had to be completed once and the forum could be quickly and easily copied for rounds two and three.



Figure 1. Enrollment of individuals in a group in D2L

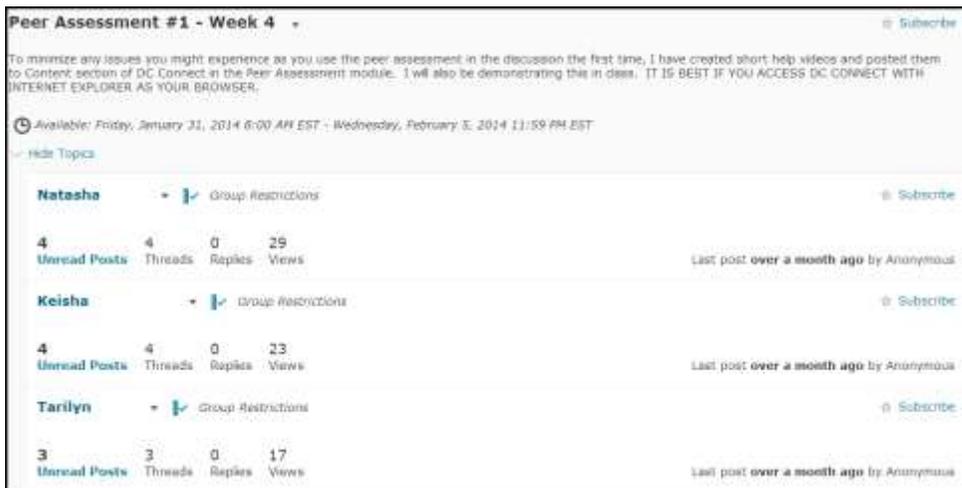


Figure 2. Student view of discussion forum with students appearing as topics

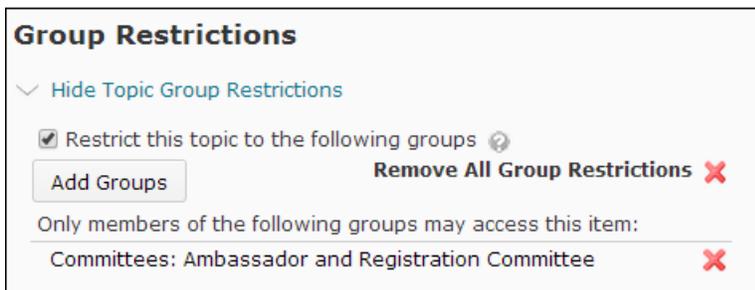


Figure 3. Group restrictions option for discussion forum.

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In order to participate in the peer assessment process, a student would complete the peer assessment tool for each member of their committee, go to the Peer Assessment Round 1 Discussion Forum in D2L, attach the peer assessment, select anonymous so their name as the assessor was not visible to their peers (posts default to public), and post the form (see Figure 4).



*Figure 4.* Student view of discussion topic to post peer assessment form

If, for example, a student had four people in total on their committee, they would make three postings. When the process was finished, each person on the committee would have three peer assessment forms with three grades as a result of the rating scale and ideally, three positive comments and three constructive comments relating to their employability skills (see Figure 5).

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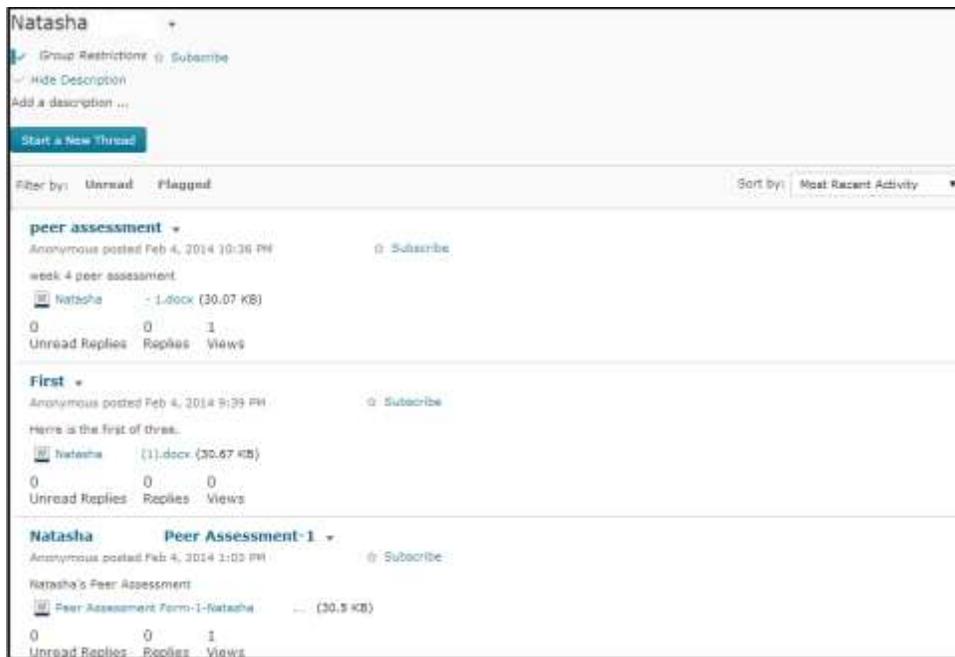


Figure 5. Student view of assessments from their peers.

On average, it would take students 10 to 15 minutes to complete one round of peer assessment.

To assist students with the process, students were provided with the following resources:

- A brief screen capture instructional video posted under Content in the Peer Assessment module in D2L (<http://screencast.com/t/anROpfVd9mzh>);
- A PDF document complete with written instructions and screen capture images of each step of the process (see Appendix B);
- A live demonstration in class; and
- A discussion forum for general “how to” questions.

D2L allows for customized instruction to be added to any Discussion Forum thus students were reminded of these resources in the Discussion Forum and received verbal reminders in class.

Students were given a five-day window to complete and post their peer assessments and received electronic reminders via the News Tool. They could view a peer’s assessment of them as soon as it was posted and were advised to download the assessment as the Discussion Forum

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was closed shortly after the peer assessment submission deadline. If any student needed to access their forms after the deadline, it was a simple matter of giving that student access for a specified time period as D2L allows instructors to create special access for individual students if required.

### **Surveys**

Prior to publishing and circulating the survey to students enrolled in the course for the 2013/2014 academic year, an email was sent to students who had completed the course in the 2012/2013 academic year inviting them to review the pre- and post-course surveys and to provide feedback regarding the questions (see Appendix C). Though the 2012/2013 students had participated in peer assessment as a summative evaluation tool, I felt that they were well positioned to consider whether or not the survey questions would solicit the intended data providing a measure of face validity. A total of 57 students were enrolled in the 2012/2013 course and 18 students provided feedback on the pre- and post-course surveys.

Participants who volunteered for the study were asked to complete an online pre-course survey in the first week of the course, the primary purpose of which was to gather data on student perceptions of peer assessment as a tool for developing employability skills. At the same time, data were gathered to gauge student perceptions of the technology being used to administer the peer assessment, and background information on the survey participants was also gathered. The survey contained 19 Likert scale items, 7 multiple choice questions, and 4 open ended questions. Eleven of the questions gave students the option of adding a comment to provide further explanation if they felt it was warranted (Appendix D).

Participants who volunteered were asked to complete an online post-course survey in the 14<sup>th</sup> week of the course, the purpose of which was to gauge any change in student perceptions as

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a result of having participated in the formative peer assessment process. The post-course survey consisted of 20 Likert scale items, 2 multiple choice questions, and 4 open ended questions. Eleven of the questions gave students the option of adding a comment (Appendix E). One additional Likert scale item was included that specifically addressed using the LMS which would not have been relevant in the pre-course survey. Demographic information that was collected in the pre-course survey was not repeated in the post-course survey accounting for the reduction in the number of multiple choice questions included in the post-course survey.

If a student wished to withdraw from the study, they simply closed the survey prior to completion. Incomplete surveys were excluded from the study. Surveys were administered via Survey Monkey (2014), an online survey tool, with students using the SIC to maintain anonymity.

## Results

### Participant Profile

Background information on participants was collected on the pre-course survey. Of the 19 students who completed the survey, 84% were female and 16% were male. Participation by gender closely reflects the breakdown of the enrolment in the course of 90% female and 10% male. A majority (58%) of the students ranged in age from 21 to 25 years, with the next largest group (32 %) ranging in age from 26 to 30 years and the smallest number of participants (10%) falling into the category of less than 21 years. Twenty-six percent of the participants came directly from high school, 42% took time off to work prior to starting college, 21% had partially completed post-secondary before coming to this program and 21 % had fully completed other post-secondary education before coming to this program. Regarding previous experience with job evaluation processes, 63% had been evaluated in a work environment through a formal process, 53% had been evaluated through an informal process, 21% had evaluated others in their capacity as a co-worker or supervisor through a formal process, 5% had evaluated others through an informal process, and 16% had never participated in a performance evaluation process in a work environment.

Of the 50 students invited to participate in the study, a total of 13 completed both the pre- and post-course surveys. The data and descriptive analysis that follows is based on those 13 surveys.

### **School & Work Context**

When asked if they had positive experiences with peer assessment in general, 84% indicated agreement or strong agreement on the post-test, with the exception of two participants who indicated disagree. There appeared to be a shift in agreement from 62% on the pretest.

Both of the respondents who indicated that their experiences with peer assessment were not positive also indicated a lack of confidence in their peers' ability to make specific, constructive comments on their performance on the post-test after either agreeing or indicating a neutral position on the pretest. Further, when asked if peer assessment was a fair way to grade an individual's contribution to a group project, one student indicated disagreement and the other strong disagreement on the post-test. Their experience with peer assessment in the context of the career preparation course seemed to confirm their dislike for peer assessment in an educational context.

Students were asked if peer assessment helped them communicate their expectations to group members and understand their peers' expectations of them. Pretest and post-test responses were identical in both cases with 69% indicating agreement or strong agreement. There was a shift towards stronger agreement on the post-test. Research confirms that involving students in the design of the peer assessment tool is viewed favourably with respect to being a fair assessment tool and giving them ownership of the process (Liu & Carless, 2006; Tillema et al., 2011). Students were asked to indicate the importance of involving them in the design of the tool. As shown in Table 1 students felt much more strongly about being involved in designing the peer assessment tool after they completed the peer assessment process.

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Table 1

Student Perceptions of Importance of Inclusion in Peer Assessment Design

<b>Question: It is important for students to be involved in developing content for the peer assessment tool that will be used (e.g., criteria, ratings, scale, etc.).</b>					
	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>Pretest</b>	15%	69%	8%	8%	0
<b>Post-test</b>	62%	31%	8%	0	0

When asked if peer assessment was a fair way to grade an individual’s contribution to a group project, 62% chose agree or strongly agree on the post-test. This represents a shift in agreement from the pretest where only 31% of the respondents indicated agreement. One student chose strongly disagree and as noted above, this student appeared to have a less than favourable experience with the peer assessment process, both in the context of this course and in previous educational experiences.

Because of the unique structure of the legal career preparation course, one of the goals is to help students make connections between the peer assessment process and the performance assessment process utilized in the professional work environment they will be entering upon graduation. Students were asked if they understood how peer assessment relates to the work environment. Though pretest and post-test agreement was identical with 92% indicating agree or strongly agree, there was a shift in agreement with 53% indicating strongly agree on the post-test as compared to 23% on the pretest.

Interestingly, when asked if peer assessment was a valuable way to develop employability skills, there was a shift in agreement on the post-test with 46% choosing agree as compared to 62% on the pretest. Those who shifted moved from agreement to a neutral position.

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For reference, each indented quote in this section is taken from the responses of individual students; paragraph breaks connote a quote from a different student.

*As long as the students provide constructive feedback, and not just negative feedback. (post-test comment)*

*I feel that this assessment would have been a little more realistic if all members that were in a group were from different friend groups. (post-test comment)*

### **Confidence & Comfort**

On Question 7 regarding students' confidence to fairly assess their peers' employability skills using a ratings scale, all students indicated agree or strongly agree but, with the exception of one student who chose disagree on the post-test, there appeared to be a shift towards stronger agreement as indicated in Table 2.

*I believe being able to make specific comments on my peers' employability skills is more helpful than using a rating scale—you can provide examples of specific events, and embellish on why they may or may not have a certain skill. (pretest comment)*

*After getting to know my peers and working with them for a longer amount of time, I feel I was better able to assess their abilities, etc. (post-test comment)*

*I often find it difficult to fairly assess my peers even though it is confidential. It can sometimes be easy to find out who said what by the group dynamics. For example if the group has members that are friends it is easy to decipher what was said. (post-test comment)*

On Question 8 regarding students' confidence in making constructive comments about their peers' employability skills, a majority indicated agree or strongly agree on the post-test with the exception of one student who chose disagree and two students who neither agreed nor disagreed. Even though a majority were in agreement, there was a lower level of agreement on the post-test.

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*[Making] Constructive comments can be difficult when the person has provided nothing but positive contributions. (post-test comment)*

On Questions 9 and 10 regarding students’ confidence in their peers’ ability to assess them using a ratings scale and to make constructive comments about their employability skills respectively, Table 2 illustrates a substantial shift towards agreement in the post-test.

Table 2

Confidence in Self and Peers’ Ability to Assess Employability Skills

	Confidence in SELF			Confidence in PEERS		
	Confidence in my ability to fairly rate my peers using a ratings scale			Confidence in my peers’ ability to fairly rate me using a ratings scale		
	Strongly Agree	Agree	Disagree	Agree	Neutral	Disagree
<b>Pretest</b>	15%	85%	0	23%	54%	23%
<b>Post-test</b>	46%	46%	8%	77%	15%	8%
	Confidence in my ability to make constructive comments for peers			Confidence in my peers’ ability to make constructive comments for me		
	Strongly Agree	Agree	Disagree	Agree	Neutral	Disagree
<b>Pretest</b>	23%	77%	0	38%	54%	8%
<b>Post-test</b>	15%	62%	8%	62%	23%	8%

On Question 28 regarding students’ level of comfort participating in a peer assessment process that was anonymous, comfort levels were extremely high both pre and post-test at 92% and 100% respectively with a majority indicating strong agreement. On Question 29 regarding students’ ability to provide honest, constructive feedback anonymously, confidence levels were quite high with a considerable shift towards strong agreement from 38% in the pre-test to 62% in the post-test.

The student who indicated disagree on the post-test for Questions 7 and 8 appeared to lose confidence in her ability to rate her peers after participating in the peer assessment process, moving from agree in the pretest to disagree in the post-test; however, she gained confidence in her peers’ ability to rate her moving from a neutral position on the pretest to agree on the post-

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test for Questions 9 and 10. She expressed concern in both Questions 7 and 8 on the post-test noting

*I would hate to have my peers figure out that I made a constructive comment towards their work ethic and have to deal with the awkward tension for the rest of the semester.*

Interestingly, she indicated that in general, she had positive experiences with peer assessment both pretest and post-test and chose not to answer the pretest question that gave students the opportunity to note any concerns they might have about the peer assessment process. In addition, she indicated strong agreement in both the pretest and post-test for Questions 28 and 29 in relation to her comfort and confidence in providing anonymous feedback to her peers. This student had no experience with performance assessment in a work setting.

### Learning & Feedback Preferences

On Questions 11, 12, and 13, students were asked how they learn best and given three different types of peer feedback to choose from including constructive comments on performance, examples to explain how improvements could be made, and discussion with peers. As Table 3 indicates, pretest and post-test results were virtually identical.

Table 3

Student Perceptions of Learning by Type of Feedback

	Examples		Discussion		Comments	
	Strongly Agree	Strongly Agree	Agree	Agree	Strongly Agree	Agree
Pretest	38%	46%	62%	54%	38%	31%
Post-test	31%	46%	61%	54%	46%	23%

Question 20 asked students to note their preferences for *receiving* feedback aimed at helping to improve their employability skills. There was a change in feedback preference from the pretest to the post-test. For Question 21, concerning student preferences for *giving* feedback

to their peers, there was a shift in preference, though not as strong a shift as indicated for receiving feedback as evidenced in Table 4.

Table 4

Student Preferences for Feedback by Type—Giving & Receiving

<b>Receiving Feedback—Preferences</b>			
	<b>Comments</b>	<b>Examples</b>	<b>Ratings Scale</b>
<b>Pretest</b>	38%	54%	8%
<b>Post-test</b>	85%	15%	0
<b>Giving Feedback—Preferences</b>			
	<b>Comments</b>	<b>Examples</b>	<b>Ratings Scale</b>
<b>Pretest</b>	38%	54%	8%
<b>Post-test</b>	54%	23%	15%

In both the pretest and post-test, giving and receiving a numerical rating against pre-established criteria rated much lower in helpfulness and preference with only 8% of students selecting this type of feedback respectively. One student made the following general comment about giving and receiving feedback:

*If all I read are negative comments, this will for sure breed tension. I believe it is best to speak to the person face-to-face and not hide behind a peer assessment. I think it would be a good idea to incorporate a way to respectfully speak with your group members on what they thought about the assessment and clear up any miss communications so they don't carry forward to the next assessment (post-test).*

### **Technology & Peer Assessment**

Prior to the career preparation course, none of the respondents had used an online tool for peer assessment. When asked if they preferred using an online tool for peer assessment, there was agreement on the post-test with 46% indicating strongly agree and 31% indicating agree. This compares with a total of 38% indicating agreement on the pre-test. The respondent who disagreed appeared to have a negative experience with peer assessment in general.

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Regarding comfort using the LMS D2L in general, 92% chose agree or strongly agree on the post-test. Students were asked if they were confident in their ability to use the Discussion Tool in D2L as this was used to facilitate the peer assessment process. Students appeared to feel more confident prior to using the tool for peer assessment as 69% indicated strong agreement on the pretest and only 38% indicated strong agreement on the post-test. Overall, 85% of students indicated agreement or strong agreement on the post-test. One student chose strongly disagree, and again, this was the student who did not appear to benefit from the peer assessment process.

When asked whether or not their participation in the peer assessment process was influenced by D2L, the majority did not feel that it did. One participant found using D2L frustrating and commented on her inability to access her assessments in spite of the instructional resources that were provided. Two participants expressed concern over using D2L as they did not feel the process was anonymous—two others commented positively on D2L.

*I found it confusing and frustrating at times using the discussion tool. I did not know how to view my own assessments without creating a post first. I didn't end up reading my own assessments because of this. If there is a more straight forward way of posting and viewing assessments that would also help. I do not feel that the discussion tool was the most effective way of doing this.*

*I found it was not anonymous and therefore it was hard to be honest. Unless everyone is posting the assessments at the exact same time it is easy to figure out who is the author.*

*I liked having the peer assessment online through D2L. It was something that I checked daily and made sense to use it for the peer assessment. I found it challenging to receive my first round of assessments as I didn't completely understand the process, but once it was explained to me by a peer, I was fine.*

*D2L made it a lot easier to do the peer assessment which is a driving factor in why people participated.*

### Peer Assessment – Roses & Thorns

The potential benefits and drawbacks of peer assessment are well documented in the literature (Liu & Carless, 2006; Pare & Joordans, 2008; Ploegh et al., 2009; Sluijsman et al., 1999; Tillema et al., 2011; Willey & Gardner, 2010). Students were invited to comment on what they liked most about peer assessment and what they liked least about it. Not surprisingly, many of the things noted were in keeping with the existing literature.

When reviewing what students liked the most, comments that appeared frequently included gaining insight from how others perceived their contribution, being able to improve as a result of specific feedback, providing feedback to others to help motivate them, creating peer to peer accountability and being awarded based on performance. Comments were consistent from the pretest to the post-test. A sampling of typical comments appears below.

*I can see the feedback (good or bad) about myself and if it's good, well that's fantastic I can bump my game up to get a 'great' next time. If my score is 'bad' then I know my weakness, and in that I can strengthen that and try harder.*

*I can see an honest reflection about how my peers view me, which I can then use to alter, or improve, as the case may be, my employability skills.*

*It gives me the opportunity to explain to others where they can improve in a professional way, as well as where I can improve.*

*It is a fair way to grade, it also holds you more accountable to your group, which for most would create more motivation.*

*Knowing that your peers will be grading you and providing specific comments on your performance forces people to act more cooperatively than if the group all receives the same mark that is based on the final product alone.*

In terms of what students liked the least, comments that appeared frequently included letting personal bias negatively influence the assessment instead of actual performance, providing feedback that might cause tension or retaliation, lacking the skill or maturity to properly assess a peer and having ratings without feedback to explain the

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ratings. Comments were consistent from the pretest to the post test. A sampling of typical comments appears below.

*I don't like that there is the potential for personal grudges or judgments that are unrelated to the group work to be unjustly used when making the peer assessments.*

*Those that may not put any real thought into the feedback given, and on the other end of the spectrum those that are very particular and much too harsh with their feedback.*

*I don't like that some people may not evaluate their group members based solely on their performance. I am afraid that some may evaluate others based on their personal opinion of them.*

*You don't always know why you received the grade you did.*

On the pretest, students were invited to share any concerns they might have prior to embarking on the peer assessment process. Nine of the 13 respondents chose to comment. The vast majority of concerns focused on fear of personal bias impacting the assessment process. As these students were in the final semester of a three year program, they had developed social relationships and had prior group work experiences that some felt had the potential to negatively influence a person's grade.

*My concerns are that my peers may not necessarily like me or be my friend. That being said, this could affect the assessment given on me.*

*These things shouldn't matter, but I see it in this course, that some people look out for each other just to get good marks, and not basing it on proper skills and strictly evaluate.*

*I am concerned that they will use their personal opinion against me. My main concern is personal biases being reflected in peer assessments – people not 'beginning' at a neutral stage; any problems from previous courses are 'brought into' this course, which could reflect the mark they provide.*

The next biggest concern centered on people not being in a position to accurately evaluate their peers.

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*My concerns are, if those individuals who are assessing me do not show up to class, how will they be able to accurately tell me what I can improve on?*

*My concern is that some of the time when these type of evaluation you receive information from those that really do not put the effort forth to evaluate properly.*

*If a group member is never there, how can they accurately grade me?*

*That the feedback from students who do not actively engage in the group, or are not present for group discussions are given the same weight as those who were.*

### **The Last Word**

Students were invited to make any additional comments about peer assessment and the development of employability skills. No comments were made on the pretest, but the following comments were made on the post-test.

*I feel that if the groups were given time in class to respond and review each assessment and discuss in person the results it would be a more valuable experience. The anonymity makes commenting less stressful, but it also makes people less accountable for their criticism. I think having face to face discussions with the group members would directly apply to the development of employability skills because in working environments criticism is not likely anonymous and we need to know how to accept and respond to such criticism in person without the benefit of hiding behind a computer screen and anonymously posting.*

*A couple group members were best friends and confronted the other group members about their comments in the assessment from round 1. It made it impossible to be honest in the following 2 rounds.*

*As a school simulation I think the assessment is as good as it can be. Due to the nature of school it can be more difficult to coordinate sending each other work for review with people having home lives and job lives that can create scheduling issues. And certain group members could just not communicate outside class time at all. Whereas in the workplace you will probably all be reliably in the same building at the same time so a group can work together with much more ease and you would all be focused on workplace tasks as they are why you are together in the first place, and not just randomly thrown into a class together because you happened to take the same program. Overall, I think the committee work was a nice sample of trying to imitate what it is like in a real legal environment.*

### **Discussion**

Teachers often construct learning environments and create learning experiences that they hope will allow their students to achieve learning outcomes in ways that are meaningful and valuable in the eyes of their students. Though the connections between experiences and learning may not always be complete and immediate for students, teachers hope that students will eventually make those connections. Sometimes, they may make the connections upon reflection days or weeks later; other times, they may make the connections when confronted with a similar situation. The objective of this research project was to explore student perceptions of the learning experience – in this case, formative peer assessment – in the development of their employability skills. Ultimately, I was hoping to gain insight that would help me shape course design and assessment. Not surprisingly, everything did not go according to plan. In this section, I will address my research questions, explain issues that arose in the course of the project, and identify future areas for research.

Anecdotally, students frequently identify not understanding what is expected of them, being able to communicate questions and concerns to their employer and making mistakes on the job as being at the top of their list of concerns. My personal observations having taught students in this justice studies program for the past 14 years are that most of them simply lack the practice or have received insufficient feedback to know with some degree of certainty that they are ready for entry level employment in their field. One of the important functions of peer assessment in several of the courses I teach is to address the gap between what the students have the skill to do and what they have the confidence to do.

### **The Value of Peer Assessment & Developing Employability Skills**

Knowles (1984) acknowledged that learners bring a wealth of prior experiences to the learning environment that makes the education of adults different from the education of children. Not all of those experiences are necessarily positive and in some cases, those experiences may mean that there are potential biases being brought to the adult learning environment. Because prior experiences, both negative and positive, can influence future experiences, I wanted to gauge how participants in this research project viewed peer assessment in general before embarking on the course. On the pretest, 62% of the students agreed that they had positive experiences with peer assessment and 31% were neutral suggesting that the likelihood for prior experiences to negatively influence the participants' perceptions was quite low. Given that agreement rose to 84% on the post-test, it would appear that peer assessment was, in general, well received by the students.

The term "employability skills" includes a wide range of skills. For the scope of this project, I wanted to focus on employability skills that could realistically be addressed through peer assessment over a 14 week period and that made sense in the context of the course the students were taking and the committee work they were going to be a part of. The peer assessment tool was designed by the students and encompassed the following employability skills areas: attendance, communication, work contribution, teamwork, and personal responsibility/accountability (Appendix A), all of which are identified in the Conference Board of Canada's Employability Skills 2000+ profile (Bloom & Kitagawa, 1999) and in the MTCU (2005) program standards. Involving students in the design of the peer assessment tool gave them the opportunity to decide what criteria they felt was important in terms of employability skills and to communicate this to their peers well in advance of actually working with each other.

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The pre- and post-course surveys focused on student perceptions of peer assessment as a tool for learning and assessment, and for developing communication skills and confidence.

### *Research Question 1*

*What influence does technology supported formative peer assessment have on student perceptions of the value of peer assessment:*

*a. in the development of employability skills?*

*b. to their learning?*

After completing the peer assessment process, students reported having a better understanding of how peer assessment related to the work environment and agreed that peer assessment helped them both communicate and understand work expectations. In addition, students felt a greater level of confidence in using ratings scales to assess their peers' employability skills. This suggests that using peer assessment in a simulated work environment helps students feel better able to make connections to the work environment. Though it cannot be assumed from this that students will perform better in a work environment, it may help them transition more confidently to the workplace. Students were less confident with their ability to make constructive comments on their peers' employability skills after participating in the peer assessment process (77% post-test as compared to 100% pretest). The discrepancy between pretest and post-test confidence levels may be the result of students lacking experience and thus, the ability to accurately judge their capacity to provide written feedback. Having to actually perform the skill in a realistic setting may have given them a better appreciation of what the skill involves, thus a more accurate picture of how adept they are in providing feedback. This is not

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entirely surprising given that only 21% of participants reported having experience evaluating others at work through a formal performance evaluation process.

On the pretest, students were invited to detail any concerns they had going into the peer assessment process. There appeared to be considerable concern regarding the potential for peers to let personal bias negatively influence their assessment. In addition, several students were worried that their peers lacked the skill to accurately and fairly assess their employability skills.

The following comments were typical of the fears expressed:

*That people will take things personally or provide opinions rather than constructive feedback.*

*That college students may not be mature enough to put aside their personal feelings and give bad reviews based on dislike of people.*

These misgivings were reflected elsewhere on the pretest when students were asked to rate their confidence in their peers' ability to assess them using a ratings scale – 23% agreement – and to provide constructive comments on their employability skills – 38% agreement. On the post-test, however, there was a considerable shift in agreement from 23% to 76% and from 38% to 62% respectively. This suggests that student fears were perhaps unfounded and that students felt the assessments they received were representative of their efforts. This result, combined with the increase in self-confidence to assess peers allows for the possibility that students developed their ability to communicate effectively, which is an important employability skill.

In spite of compelling shifts in agreement in a number of areas related to the development of employability skills from the pretest to the post-test, when asked directly if peer assessment was a valuable way to develop employability skills, agreement dropped slightly from 77% to 61% on the post-test. It is possible that this can be attributed to students not making the connection between doing things in the course that

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encouraged the development and demonstration of employability skills – working in teams, making decisions, solving problems, communicating with each other, managing time and tasks – and participating in the peer assessment process. They may have seen working in groups as being a valuable way to develop this skill set, but not the actual process of evaluating the group work, i.e., peer assessment. The ability to accept and provide feedback in a constructive manner is, in and of itself, an employability skill (Bloom & Kitagawa, 1999), and peer assessment that incorporates qualitative comments gives students the opportunity to practice and develop that skill. Several studies indicate that well designed peer assessment processes include providing appropriate training for students and having discussions to support the process (Tillema et al., 2011; van Zundert et al., 2010; Willey & Gardner, 2010). If the lower post-test agreement is due to a failure to make connections, training throughout the entire process may help rather than only providing training at the beginning of the course. In addition, in-class and online discussion that might have helped students make connections did not unfold as planned (see Research Question 4 for details).

With respect to peer assessment and learning, students felt strongly that written comments were more helpful to their learning than discussions with their peers. In addition, a majority preferred to give and receive feedback in the form of constructive comments related specifically to their performance. This finding is in keeping with studies where students found comments to be more helpful than grades and supports the inclusion of qualitative comments in the design of the peer assessment process (Liu & Carless, 2006; Patton, 2012; Ploegh et al., 2009; Tillema et al., 2011; van Zundert et al., 2010; Willey & Gardner, 2010). It has been suggested that having students grade or rate the quality of the comments received from peers can positively impact the peer

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assessment process in terms of student engagement and commitment, and the value of comments made by peers to future learning (Bloxham & West, 2004; Pare & Joordens, 2008). This would be an interesting modification to the formative peer assessment process used for the career preparation course and an area for further study. In their review of studies utilizing peer assessment for learning, Tillema et al. (2011) sought to identify criteria for quality assurance in the design of peer assessment. They found very few studies that focused on the criterion “providing guidance and feedback” (p. 30), yet several studies allude to this being both necessary and valued (Liu & Carless, 2006; Patton, 2012; Ploegh et al., 2009; Tillema et al., 2011; van Zundert et al., 2010; Willey & Gardner, 2010) suggesting another area for exploration.

### **Technology & Peer Assessment**

In spite of all of the benefits of peer assessment, one substantial barrier to its use is the administrative time required to manage the flow of the feedback process (Ballantyne, Hughes, & Mylonas, 2002). Even if teachers are convinced that peer assessment is a valid and valuable form of assessment, they must deal with the practical reality of time constraints. Though a number of web-based peer assessment tools have been developed and utilized in higher education, finding one that fit all of my requirements proved to be challenging. In addition to needing something that would allow for anonymity of assessors, multiple cycles of assessment, and minimal teacher intervention, I wanted something that would not add cost for the students and that did not require students to create unique identifiers or register personal information. Most importantly for me, I needed reliable technical support in the event that I encountered issues during implementation. I investigated two products that appeared to be very robust

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and customizable: peerScholar (Pare & Joordans, 2008) and SPARK<sup>PLUS</sup> (Willey & Gardner, 2009), and one that was free, iPeer, but was unable to utilize these products for a variety of reasons including cost, accessibility and technical support. In order to make peer assessment more accessible across disciplines and contexts than many of the web-based tools currently on the market, I wanted to find a way to use the college's LMS and after consultation with college support staff, the decision was made to use the Discussion Forum in D2L.

### *Research Question 2*

*What impact does utilizing an online tool have on the process of collecting data and administering the peer assessment process for teachers?*

The only source of data for this question was my own personal experience using peer assessment before embarking on this project and comparing that to my experience using D2L. Prior to this experience, I had very little knowledge of peer assessment and had used it only once in a formative fashion. In addition, I had limited knowledge of the LMS. The process at that time involved students submitting completed peer assessments via the assignment tool in the college's LMS (at the time, WebCT). I was the only one with access to the assignment tool which meant I had to cut comments and ratings from several individual Microsoft Word documents, paste them into one document and then email the document to each student to preserve the assessor's anonymity. I had 60 students in my class and students were in groups of 4 which resulted in 180 individual forms being submitted, reviewed and edited for re-distribution. This process delayed the immediacy of the feedback and was very time consuming and labour intensive. As a college teacher, I had over 180 students in three different courses and no teaching

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assistants, thus all course work and evaluation rested with me. When the semester was over, I suspected that I spent far more time managing the process than the students spent reading and using the feedback and thus, did not repeat the experience. Instead, I used peer assessment where appropriate in a summative fashion as I still valued peer assessment as a learning experience. Doing this cut down on the administrative workload associated with using peer assessment; however, the group work experiences where peer assessment was used occurred at the end of the term. Students would submit the assessments via the LMS assignment tool, but assessments were used to arrive at a grade for an individual's contribution to the group project and were never distributed to the students directly. I had solved the problem of administrative workload at significant cost to the learning.

These experiences, coupled with a review of articles that addressed quality criteria in peer assessment, led to the peer assessment process design that was used in this project. There are three important things that using the discussion forum in D2L achieved that are in keeping with quality design considerations for peer assessment. It allowed students to submit assessments anonymously, to make qualitative comments, and to access their peers' feedback immediately without any intervention on my part. When I reflect on the administrative work required of me for the two formative applications of peer assessment I have experienced, there is no comparison; using the Discussion Forum in D2L was a fraction of the work for me.

Because this was the first time using peer assessment in this fashion, it required a small investment of my time, approximately 1 hour, to create the instructional video and text-based instructions. In addition, I met with college D2L support staff for a total of three hours to work through the process and learn how to set everything up in the

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Discussion Forum. The one thing I had not thought through in advance was how I would review all of the peer assessment forms to calculate the grades students had given each other using the ratings scale (see Figure 6). When documents are submitted through the assignment Dropbox in D2L, instructors can download everything into one zip file for quick and easy access via Microsoft Windows file management. This was not the case for the Discussion Forum. Each form from each student in each of the three rounds of assessment had to be downloaded, opened, and recorded. This was not a difficult task requiring a high level of technical skill, but it did take time. It took approximately one hour per round of assessment to achieve this for a total of three hours. This was still less time than in my previous iteration of formative peer assessment; however because one of

Name of person being assessed 	Click here to enter text.
<b>Attendance:</b> <ul style="list-style-type: none"> <li>• Attended class/committee meetings consistently</li> <li>• Came prepared and contributed to the meetings</li> <li>• Focused on work during the meetings</li> </ul>	5
<b>Communication:</b> <ul style="list-style-type: none"> <li>• Initiated and responded to communication in a reasonable amount of time (24-hour)                             <ul style="list-style-type: none"> <li>○ Email, discussion posts, texts (if applicable)</li> </ul> </li> <li>• Communication was respectful</li> <li>• Listened to other committee members</li> </ul>	5
<b>Work Contribution:</b> <ul style="list-style-type: none"> <li>• Contributed equally and reliably to all aspects of the committee’s tasks and responsibilities</li> <li>• Contribution was of strong quality and within committee’s deadlines</li> </ul>	5
<b>Team Work:</b> <ul style="list-style-type: none"> <li>• Demonstrated positive team work skills including                             <ul style="list-style-type: none"> <li>○ professionalism, commitment, support, respect, reliability</li> </ul> </li> <li>• Supportive of other group members</li> <li>• Actively offered input and ideas/suggestions</li> <li>• Had a positive attitude and managed stress professionally</li> </ul>	5
<b>Personal Responsibility/Accountability:</b> <ul style="list-style-type: none"> <li>• Demonstrated personal responsibility</li> <li>• Followed up if absent, notified committee members in advance of absences</li> <li>• Demonstrated initiative by offering to take on tasks rather than waiting to be told.</li> </ul>	5
<b>Total of all ratings out of 25 marks</b>	Click here to enter text.

Figure 6. Peer assessment tool rating scale.

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the objectives of this project was to lighten the administrative workload, I may eliminate peer to peer grading on employability skills and instead, have a peer assessment tool that is entirely comments based (see Figure 7). Then, I would have students rate the helpfulness/quality of comments their peers make with respect to their employability skills. This will require further investigation to determine whether or not peer to peer grading can be accomplished within the D2L environment without teacher intervention, and whether or not a grade or Likert-type rating of peers' comments, coupled with appropriate training and discussion, might be more effective in terms of assessment for learning and in reducing administrative workload.

Name of person being assessed	Comments
<b>Attendance:</b> <ul style="list-style-type: none"> <li>• Attended class/committee meetings consistently</li> <li>• Came prepared and contributed to the meetings</li> <li>• Focused on work during the meetings</li> </ul>	
<b>Communication:</b> <ul style="list-style-type: none"> <li>• Initiated and responded to communication in a reasonable amount of time (24-hour)               <ul style="list-style-type: none"> <li>◦ Email, discussion posts, texts (if applicable)</li> </ul> </li> <li>• Communication was respectful</li> <li>• Listened to other committee members</li> </ul>	
<b>Work Contribution:</b> <ul style="list-style-type: none"> <li>• Contributed equally and reliably to all aspects of the committee's tasks and responsibilities</li> <li>• Contribution was of strong quality and within committee's deadlines</li> </ul>	
<b>Team Work:</b> <ul style="list-style-type: none"> <li>• Demonstrated positive team work skills including               <ul style="list-style-type: none"> <li>◦ professionalism, commitment, support, respect, reliability</li> </ul> </li> <li>• Supportive of other group members</li> <li>• Actively offered input and ideas/suggestions</li> <li>• Had a positive attitude and managed stress professionally</li> </ul>	
<b>Personal Responsibility/Accountability:</b> <ul style="list-style-type: none"> <li>• Demonstrated personal responsibility</li> <li>• Followed up if absent, notified committee members in advance of absences</li> <li>• Demonstrated initiative by offering to take on tasks rather than waiting to be told.</li> </ul>	

Figure 7. Proposed peer assessment tool using comments.

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### *Research Question 3*

*How does utilizing an online tool influence student participation and perceptions of the peer assessment process?*

Because grades were associated with peer assessment, it is likely that students would have participated regardless of whether or not the process was paper-based or online. In fact, a majority of students did not feel that using an online tool influenced their participation in the process. Though grades were involved, some students did not submit peer assessments for all three rounds. Given the group configurations, if all students submitted all of their peer assessments there would be 146 submissions for each round of peer assessment. Actual submissions were as follows:

Round 1 – 133 submissions

Round 2 – 125 submissions

Round 3 – 109 submissions

There are two potential reasons for not submitting all assessments. First, students may have forgotten to submit by the deadline. If a student simply forgot to submit but contacted me within 24 hours of the submission deadline, I opened the Discussion Forum for a two-hour window to enable their submission. This only happened three times. Second, they may not have cared about the grade implications of not submitting one assessment as the impact was minimal. Two students chose not to make any submissions. These students were late registering for the class and had a history of not submitting course work. It is not unusual for students to find it challenging to stay motivated and committed to their studies in the final weeks of the final year of their program.

Having said that, 77% of students on the post-test noted a preference for using an online tool compared with only 38% on the pretest. With over 90% of the students indicating they were

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comfortable using D2L prior to participating in the process, it is fair to conclude that technology did not pose a barrier to participation. The only concern expressed by a small number of students was whether or not the assessments were truly anonymous. One of the challenges in using D2L is the fact that discussion posts default to a public view where the author of the post is visible to everyone in the group. In order to make a post anonymous, students must select that option prior to posting; it is an easy thing to overlook. Even when students choose to make their post anonymous to their peers, the posts are not anonymous to the instructor and students were made aware of this at the beginning of the course. This may have influenced the content of the assessments positively in terms of students communicating criticism in a professional manner. Overall, there were extremely high levels of agreement that anonymity made participation in the peer assessment process more comfortable for students. They also agreed that they were better able to make honest, constructive comments on their peers' performance due to anonymity.

It is difficult to know for certain if the few public posts that did occur were the result of students forgetting to select the anonymous option or feeling unconcerned with group members being able to identify them. It is likely that in groups where everyone was pleased with their peers' performance, anonymity was not an issue. Some students felt that D2L was a very good way to administer peer assessment. Confidence levels in ability to use the Discussion Forum in D2L fell from the pretest to the post-test suggesting that hands-on training and practice to accompany the instructional resources provided, may make students more comfortable with the process.

In general, when something does not work as it should in D2L, I immediately receive email messages from students to ensure I am aware of the problem – especially when it may affect their grade. I received fewer than 10 email messages over the 14-week period related to

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peer assessment submission issues. This is yet another indication that using technology to facilitate the process was more beneficial to students than detrimental.

### *Research Question 4*

*How does utilizing an LMS influence student participation in discussions in support of the peer assessment process?*

The course was delivered in one 2-hour class followed two days later by a 1-hour class. Three of the 2-hour classes were cancelled due to inclement weather resulting in a loss of six hours of class time. In order to meet all of the requirements of the course, in-class discussions were, reluctantly, sacrificed. Initially, online discussions via D2L were scheduled to take place between each of the three rounds of peer assessment. Participation in the online discussions was voluntary, therefore no grade was attached to the discussions. Students were free to choose whether or not their discussion posts would be anonymous. Only five students responded to the first discussion question and no students chose to comment on the posts that were made by their peers, i.e., have an online discussion. In view of student response to the first online discussion question, questions were not posted after the second and third round of peer assessment. There are a number of possible explanations for the lack of participation. First, my personal experience is that if there is no grade attached to an activity, students are unlikely to engage in that activity. This begs the question: “Why not attach a grade to the discussions?” One of the practical challenges with formative peer assessment from an instructor’s point of view is the additional workload that it creates (Pare & Joordens, 2008). An objective of this project was to use technology to ease the workload, not to increase it. If I had assigned a grade to the discussion posts, it would have to be significant enough to motivate students to act which in turn would require an additional investment of time assessing the posts; thus, the decision was made to make

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the discussion voluntary. Second, students have a compressed school week with a full course load spread over three days and field placement for the remaining two days. Many students also have a part-time job and/or family commitments. In my experience, when students have many competing demands, they eliminate anything that does not have a grade attached to it and even if they want to participate in the activity, they often run out of time. Finally, when asked how they learn best, “discussion with peers” was ranked third out of three options on both the pretest and the post-test; consequently, student motivation to participate in discussion may have been affected. Unfortunately, a number of things led to the elimination of planned discussions – both in-class and online. On a personal note, I had limited experience and knowledge of engaging students in discussion in an online environment and it was difficult to persist with online discussion at the time given the multiple demands I was managing. In spite of this, the benefits of discussion with peers throughout the peer assessment process is well documented in the literature (Orsmond, Merry, & Callaghan, 2004; Tillema et al., 2011; Vickerman, 2009; Willey & Gardner, 2009; Willey & Gardner, 2010). Therefore, to address the need to help students make connections and enhance learning and employability skill development, in-class discussion within small groups followed by a higher level discussion involving the entire class might be of greater benefit to students. Additionally, I will need to embark on some professional development to enhance my ability to engage students in online discussion.

### **Limitations**

One limitation of this study is the small sample size. Of the 50 students registered in the class, 13 completed both the pre- and post-course surveys. In addition, a review of programs of study for a majority of diplomas offered at the college level reveals very few Ontario college courses dedicated solely to career preparation (Confederation College, 2014; Durham College,

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2014; Humber College, 2014; Seneca College, 2014) making the context of this study unusual. If a career course exists, it tends to focus on the preparation of cover letters, resumés, and interview skills or the learning occurs over a more limited period of time in the context of a general communications course. In some cases, career training may be the responsibility of general college support services (Centennial College, 2014) rather than in the context of a mandatory course.

Participants in this study had worked alongside their peers for two and a half years and interacted with me as an instructor for four courses prior to attending the legal career preparation course. This may have positively influenced comfort and trust levels and for peer assessment to be used formatively in an effective manner, students must feel that the environment is a safe and supportive one (Prins, Sluijsman, Kirschner, & Strijbos, 2005; Ploegh et al., 2009; Tillema et al., 2011). Instructors teaching students for the first time or in the initial semesters of a program may encounter challenges in using peer assessment formatively that were not present in the current study.

### **Conclusion**

The main objective of this project was to see if students perceived peer assessment as a worthwhile activity in order to enhance the quality of my students' learning and to improve my teaching practice. What I discovered was that my students' experiences were very much in keeping with those reported in the literature. Students liked using peer assessment because they viewed it as an accountability mechanism giving them a measure of control over grades if group members chose to engage in social loafing. Involving students in designing the peer assessment tool was important to them and helped create a sense of ownership of the process. In addition, using peer assessment formatively gave them the opportunity to see how their peers viewed their contributions to the group and to use feedback from their peers to improve. Over the course of

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three rounds of assessment, students discovered that fears of personal bias negatively influencing the process were not warranted and confidence levels in themselves and their peers rose. Not surprisingly, in terms of learning, the feedback element of peer assessment was valued more highly than receiving a grade. As a result of the data collected for this project, one of the things I intend to change for the next iteration of this course is the design of the peer assessment tool to focus feedback on comments rather than numerical ratings. Furthermore, I would reduce the number of assessments from three rounds to two for the following reasons: 1) the number of forms submitted dropped with each successive round of assessment suggesting assessment fatigue and/or apathy; 2) students commented that it was challenging to come up with comments if there had been little to no work required of the team from one round of assessment to another; and 3) qualitative feedback will be more time consuming for students to provide than a simple numerical rating from a dropdown menu.

Because discussion in support of peer assessment did not take place as intended but is referenced frequently in the literature with respect to quality processes, it is important to ensure that opportunities for discussion exist to help students make connections to their learning. Without meaningful discussion, students may view and approach peer assessment simply as a task required to earn a grade. Reducing the rounds of assessment from three to two would also reduce the number of discussions required and might, along with appropriate guidance and support, increase participation in discussions.

Though I thought that sufficient training and resources had been provided to enable students to submit their assessments and make connections to the employability skills they were developing—both from the coursework and the peer assessment process—the results of this study suggest that more is required. I would provide students with an opportunity to complete a practice submission in order to ensure their comfort with the technical part of the process prior to

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the first full round of peer assessment. In addition, setting up reminder notifications in the LMS might further support students in the process. Given the demands on students' time, if they are provided with more training in writing qualitative comments and are supported with discussion between assessments, fewer rounds of assessment may yield better quality feedback.

Courses like the career preparation course may be rare; however, employability skills as defined by the MTCU (2005) are required of every Ontario college diploma program making formative peer assessment an appropriate authentic assessment for a variety of contexts and disciplines. The literature is rich with examples from a wide range of programs such as engineering (Willey & Gardner, 2009), psychology (Pare & Joordens, 2009), management (Fellenz, 2006), and sports studies (Vickerman, 2009). For educators interested in using peer assessment in a formative fashion, there is no need to fear the associated administrative work. This study has demonstrated that a readily available and relatively easy to use feature on an LMS, such as a discussion forum, can be utilized to facilitate the peer assessment process.

In the past 10 years, I have used peer assessment summatively in my practice in a variety of courses that required group work. Minor modifications were made after each application as a result of feedback from students and/or my reflections on the process. This study involved making major modifications to the process as a result of reviewing literature on peer assessment for learning, and I expect to continue to refine the assessment to enhance the experience, and thus the learning.

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**Appendix A – Peer Assessment Tool**

**Committee Peer Assessment**

**Rating Scale**

- 5 – Outstanding – performed consistently and reliably from start to finish.
- 4 – Above Average – performed well the majority of the time – very reliable team member
- 3 – Average – did what was required in order to complete the task
- 2 – Below Average – did not perform consistently – required a lot of supervision and support
- 1 – Poor – performance was well below the standard required in college – could not be relied upon

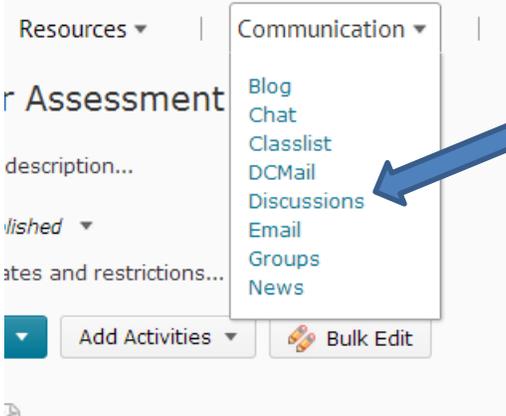
**Note: Ratings of ‘2’ or ‘1’ must be supported by comments on the form.**

<b>Name of person being assessed</b> 	Click here to enter text.
<b>Attendance:</b> <ul style="list-style-type: none"> <li>• Attended class/committee meetings consistently</li> <li>• Came prepared and contributed to the meetings</li> <li>• Focused on work during the meetings</li> </ul>	5
<b>Communication:</b> <ul style="list-style-type: none"> <li>• Initiated and responded to communication in a reasonable amount of time (24-hour)               <ul style="list-style-type: none"> <li>○ Email, discussion posts, texts (if applicable)</li> </ul> </li> <li>• Communication was respectful</li> <li>• Listened to other committee members</li> </ul>	5
<b>Work Contribution:</b> <ul style="list-style-type: none"> <li>• Contributed equally and reliably to all aspects of the committee’s tasks and responsibilities</li> <li>• Contribution was of strong quality and within committee’s deadlines</li> </ul>	5
<b>Team Work:</b> <ul style="list-style-type: none"> <li>• Demonstrated positive team work skills including               <ul style="list-style-type: none"> <li>○ professionalism, commitment, support, respect, reliability</li> </ul> </li> <li>• Supportive of other group members</li> <li>• Actively offered input and ideas/suggestions</li> <li>• Had a positive attitude and managed stress professionally</li> </ul>	5
<b>Personal Responsibility/Accountability:</b> <ul style="list-style-type: none"> <li>• Demonstrated personal responsibility</li> <li>• Followed up if absent, notified committee members in advance of absences</li> <li>• Demonstrated initiative by offering to take on tasks rather than waiting to be told.</li> </ul>	5
<b>Total of all ratings out of 25 marks</b>	Click here to enter text.
<b>Positive Comment</b> Click here to enter text.	
<b>Constructive Comment</b> Click here to enter text.	

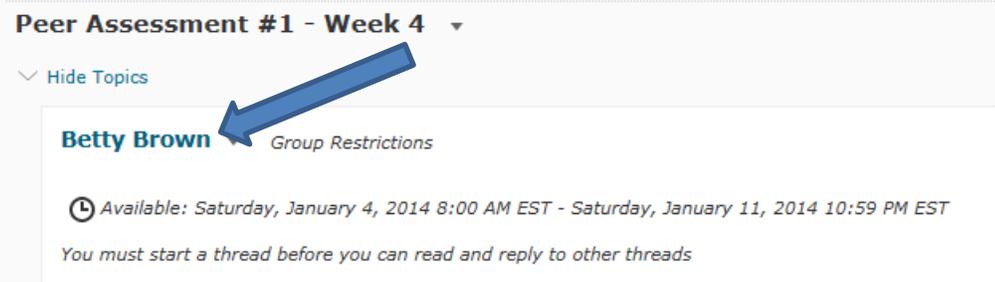
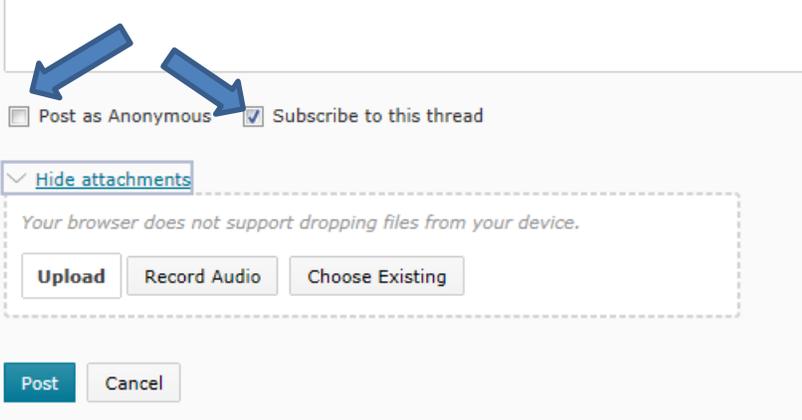
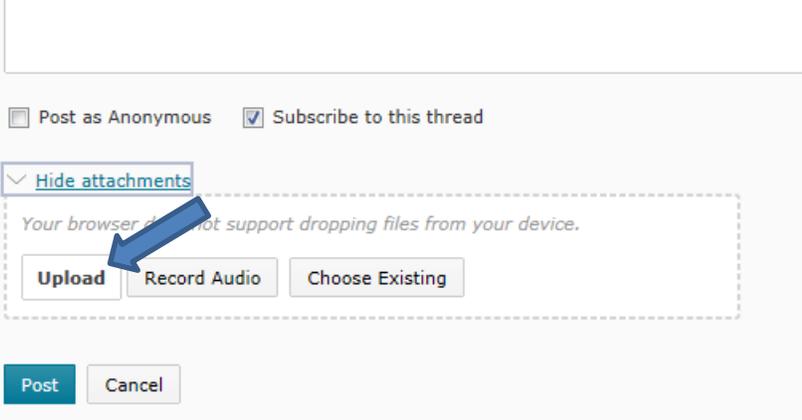
Drop down list

Appendix B – Peer Assessment Instructions

Peer Assessment Instructions - Submission

<p><b>Step 1</b></p>	<p>Download the blank Peer Assessment form from D2L (<b>Content – Peer Assessment</b>). <i>Please note that this form will be developed by the class so it will not be posted until this in-class activity has taken place.</i></p>
<p><b>Step 2</b></p>	<p>Save a copy of the form for each person in your group and use the person’s name in the filename. Ensure you save it to a secure location.</p> <p>E.g. Kathleen Stewart.docx</p> <p><b>Note: If you function in a Mac environment and have any issues with the form, you will need to resolve the issue with IT Support in the Commons.</b></p>
<p><b>Step 3</b></p>	<p>Complete the form for each person. Ensure that you complete every section of the form.</p> <p>For each person you will</p> <ol style="list-style-type: none"> <li>1. Type their name on the form.</li> <li>2. Enter a rating for each of the criteria.</li> <li>3. Total the ratings as a grade out of 25</li> <li>4. Write one positive comment that identifies something the person is doing that is contributing to the group.</li> <li>5. Write one constructive comment that identifies something the person could do to improve their contribution to the group.</li> </ol>
<p><b>Step 4</b></p>	<p>Post the forms in the D2L Discussion tool. There is a video that details this process. Written instructions appear below.</p>
<p><b>Step 5</b></p>	<p><b>USE INTERNET EXPLORER AS YOUR BROWSER FOR D2L TO AVOID TECHNICAL ISSUES THAT ARE KNOWN TO EXIST WITH CHROME AND FIREFOX.</b></p> <p>Click on the <b>Communication</b> tab and select <b>Discussions</b>.</p>  <p>The screenshot shows the D2L interface with the 'Communication' dropdown menu open. The menu items are: Blog, Chat, Classlist, DCMail, Discussions, Email, Groups, and News. A blue arrow points to the 'Discussions' option. Below the menu are buttons for 'Add Activities' and 'Bulk Edit'.</p>

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<p><b>Step 6</b></p>	<p>Click on a group member's name.</p> 
<p><b>Step 7</b></p>	<p>Select <b>Post as Anonymous</b> to ensure that your name does not appear with the post. If you have your notifications in D2L set up and you have selected 'Discussion Posts', you can check <b>Subscribe to this Thread</b> if you want to receive a notification when something is posted here. Uncheck this box if you do not wish to receive notifications.</p> 
<p><b>Step 8</b></p>	<p>Select <b>Upload</b> to attach your peer assessment form for this person.</p> <p>Select <b>Post</b> to complete the process.</p> 
<p>Repeat steps 6, 7 &amp; 8 for each person in your group. Once you have done this, you have completed the first round of the peer assessment process. This process will be repeated in weeks eight (8) and twelve (12).</p>	

## Peer Assessment Instructions – Retrieving Your Assessments

### IMPORTANT

Date restrictions will be set for each round of peer assessment and you will be notified through the **Course Home** page on the **Calendar**.

**Calendar** | ▾

Saturday, January 4, 2014

Upcoming events

- JAN 10:59 PM Betty Brown - Availability Ends
- JAN 11:59 PM David Drummond - Availability Ends

Once all of the assessments are in, the assessments will be available for a restricted time period for you to download. After the deadline has passed, you will no longer be able to access your peer assessments.

### Step 1

Go to the **Discussions** tool.

Resources ▾ | Communication ▾

- Blog
- Chat
- Classlist
- DCMail
- Discussions
- Email
- Groups
- News

Add Activities ▾ | Bulk Edit

### Step 2

Click on your name.

Peer Assessment #1 - Week 4 ▾

Hide Topics

**Betty Brown** Group Restrictions

Available: Saturday, January 4, 2014 8:00 AM EST - Saturday, January 11, 2014 10:59 PM EST

You must start a thread before you can read and reply to other threads

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<b>Step 3</b>	<p>Download and save each attachment.</p> <div data-bbox="354 235 1198 409"><p><b>Betty Brown</b> ▾ Group Restrictions ☆ <a href="#">Subscribe</a> 🕒 Available: Saturday, January 4, 2014 8:00 AM EST - Saturday, January 11, 2014 10:59 PM EST <a href="#">Start a New Thread</a></p></div> <div data-bbox="354 415 1198 466"><p>Filter by: <b>Unread</b>   <b>Flagged</b></p></div> <div data-bbox="354 478 1198 667"><p><b>PA1</b> ▾ Anonymous posted Jan 4, 2014 6:03 PM ★ <a href="#">Subscribed</a> see attached <a href="#">📄 Betty B.docx (15.4 KB)</a> 0                    0                    0 Unread Replies    Replies            Views</p></div> <div data-bbox="354 680 1198 869"><p><b>Peer 1</b> ▾ Anonymous posted Jan 4, 2014 6:03 PM ★ <a href="#">Subscribed</a> See attached <a href="#">📄 Betty Brown Sample.doc (45 KB)</a> 0                    0                    0 Unread Replies    Replies            Views</p></div> <div data-bbox="354 882 1198 1062"><p><b>p1</b> ▾ Anonymous posted Jan 4, 2014 4:18 PM ☆ <a href="#">Subscribe</a> see attached <a href="#">📄 Betty Brown Sample.doc.docx (23.98 KB)</a> 0                    0                    0 Unread Replies    Replies            Views</p></div>
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Appendix C – Email Invitation to 2012-2013 Students for Survey Review

**Kathleen Stewart**

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**Subject:** Request - masters project

Hi Everyone:

I am in the final stages of completing my Masters in Education degree and have elected to conduct a research project based on the peer assessment used in the Legal Career Preparation class, though I am modifying the process from what you experienced considerably for my research. Specifically, I will be looking at student perceptions of the role peer assessment plays in the development of employability skills such as team work, initiative, problem solving, decision making, etc..

In order to conduct the research, I must submit my project proposal to a research ethics board in September and include all of the tools I will be using to collect data - namely online surveys. To ensure that I'm asking the right questions, I want to consult with students who have already experienced peer assessment in this course. If you choose to assist me, this will involve reviewing the surveys and giving me your feedback and suggestions with respect to the questions.

If you would like to review the surveys, please respond to this email. If you choose to participate, I will provide you with more information regarding how I will be conducting my research. I look forward to hearing from you.

Kathleen

Kathleen Stewart  
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F: 905.721.3116  
E: [kathleen.stewart@durhamcollege.ca](mailto:kathleen.stewart@durhamcollege.ca)  
Skype: Kathleen.stewart21

Appendix D – Pre-Course Survey

**Technology Supported Formative Peer Assessment - Pre-Course Survey**

**Letter of Information & Consent**

Dear Participant,

Thank you for your interest in this study. This is a request for your consent to participate in the study through a pre- and post-course survey, and the completion of online peer assessments. The purpose of the study is to examine student perceptions with respect to formative peer assessment in the development of employability skills. The study is being conducted by Kathleen Stewart, Professor in the School of Justice and Emergency Services at Durham College as a requirement of completion of the Masters of Education, UOIT. Participation in the study is completely voluntary and anonymous. If you choose not to participate in this study, it will not affect you as a student in any way.

I want to emphasize and assure you of the following:

- Participation in the study is voluntary and you are free to decline participation without explanation or consequence
- You may elect to have your data excluded from the study at any time by exiting the surveys prior to completion or by submitting your unique Student Identification Code via email to the researcher within one week of the final grades being released by the college. Any data collected up to that point will be excluded from the study.
- There are no potential risks to you participating in the survey
- All raw data collected through Survey Monkey is anonymous and will only be available to the principal investigator of this project (Kathleen Stewart). All data will be deleted from Survey Monkey after it has been downloaded.
- All raw data collected through peer evaluations and DC Connect is confidential
- All raw data collected through the surveys and DC Connect will be encrypted and password protected on a hard drive and locked in a cabinet in the principal investigator's home.

While you may or may not personally benefit from this study, research has shown that participation in peer assessment can increase engagement and self-confidence, and can help students develop critical thinking, judgment, and reflection skills. In addition, it has been shown to help learners become more autonomous while supporting content specific learning. There is potential for you to experience one or more of these benefits. In addition, your participation may benefit future students and professors who wish to use peer assessment.

The information compiled from this study may be shared with the academic community through presentations at professional conferences and/or submitted for peer review and publication in an academic journal. The information collected through this study will be used as part of group data only. No individuals will be identified and all information will be held in the strictest confidence. Through these safeguards, there is no risk to you in participating in this study. Furthermore, by consenting, participants have not waived any rights to legal recourse in the event of research-related harm.

This study has been reviewed and accepted by the Research Ethics Board at the University of Ontario Institute of Technology (UOIT) (file #13-041) as well as the Research Ethics Board at Durham College (file #049-1314).

If you have any questions or concerns about your role as a research participant in this study, please contact Deborah Tsagris, Acting Chair - Research Ethics Board Durham College by email using [Deborah.tsagris@durhamcollege.ca](mailto:Deborah.tsagris@durhamcollege.ca) or by phone at 905.721.2000 extension 7381.

If you have any questions or concerns about this study, or, if you are interested in reading the results of this study after the study's completion in the summer of 2014, please e-mail me at [Kathleen.stewart@durhamcollege.ca](mailto:Kathleen.stewart@durhamcollege.ca) or call 905.721.2000, extension 7380. You may also contact my research supervisor, Dr. Bill Hunter by email using [bill.hunter@uoit.ca](mailto:bill.hunter@uoit.ca) or by phone at 905.721.8668 extension 3827.

Thank you for your assistance.

Kathleen Stewart  
Masters Candidate in Education and Digital Technologies, UOIT and Professor,  
School of Justice and Emergenc

## Consent

**Having read and understood this letter of information and consent, by indicating my willingness to take part below:**

- **I freely consent to participate in this research project.**
- **I have read this letter of information and had all questions answered to my satisfaction.**
- **I understand that my participation is voluntary and I am free to withdraw at any time without consequence.**
- **I understand that data I provide for the study will be analyzed and reported on in research presentations and publications.**
- **I understand that my identity will remain confidential.**
- **If I wish to end my participation in this study, I simply have to close my browser and take no further action. If I wish to end my participation in this study after completing the surveys, I simply submit my unique Student Identification Code to the researcher via email within one week of the final grades being released by the college and any data collected to that point will be excluded from the study.**

**I have read and understand the information in this consent form and I am willing to participate in the study**

Yes

No

Participation in this research study is voluntary and confidential. You may withdraw from the study at any time by exiting the survey prior to completion or by submitting your SIC via email to the researcher within one week of the final grades being released by the college.

**Student Identification Code (SIC)**

## A. Participant Background Information

Background information provides a context that enriches our understanding of what affects the other survey responses. Only summary data will be reported in order to maintain participant anonymity and confidentiality.

**Gender**

Male

Female

## Technology Supported Formative Peer Assessment - Pre-Course Survey

### Age

- less than 21 years
- 21 - 25 years
- 26 - 30 years
- 31 - 35 years
- over 31 years

### Pathway to college (check all that apply)

- came directly from high school
- took time off/worked between high school and college
- have previous post-secondary experience but did not complete
- completed previous post-secondary experience

### Job Evaluation Experience (check all that apply)

- I have been evaluated in a work environment as part of a formal process i.e., evaluations were completed at specific times (e.g., weekly, monthly, annually), they were documented using a specific form, meetings were held to discuss the results, etc.
- I have been evaluated in a work environment as part of an informal process i.e., there was no specific schedule/cycle for the evaluations; the reviews consisted of verbal feedback, etc.
- I have evaluated others in a work environment as a co-worker/supervisor as part of a formal evaluation process i.e., evaluations were completed at specific times (e.g., weekly, monthly, annually), they were documented using a specific form, meetings were held to discuss the results, etc.
- I have evaluated others in a work environment as a co-worker/supervisor as part of an informal process i.e., there was no specific schedule/cycle for the evaluations; the reviews consisted of verbal feedback, etc.
- I have never participated in performance evaluation processes in a work environment.

## B. Peer Assessment Experience & Perceptions

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
In general, I have had positive experiences with peer assessment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Technology Supported Formative Peer Assessment - Pre-Course Survey

### Peer Assessment Experience & Perceptions

I am confident in MY ability to fairly assess my peers' employability skills using a ratings scale (e.g., rate communication skills on a scale of 1 to 5).

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

Comment

### Peer Assessment Experience & Perceptions

I am confident in MY ability to make specific, constructive comments on my peers' employability skills.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

Comment

### Peer Assessment Experience & Perceptions

I am confident in my PEERS' ability to fairly assess my employability skills (e.g., rate communication skills on a scale of 1 to 5)

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

Comment

### Peer Assessment Experience & Perceptions

I am confident in my PEERS' ability to make specific, constructive comments on my employability skills.

Strongly Agree   Agree   Neither Agree nor Disagree   Disagree   Strongly Disagree

Comment

## Technology Supported Formative Peer Assessment - Pre-Course Survey

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I receive specific, constructive comments on my performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I am given examples to explain how improvements can be made.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I have discussions with my peers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Peer assessment is a fair way to grade an individual's contribution to a group project.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Participating in peer assessment helps me understand what my peers expect of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Participating in peer assessment helps me communicate what I expect of my peers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Technology Supported Formative Peer Assessment - Pre-Course Survey

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I understand how peer assessment relates to working in a professional environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
It is important for students to be involved in developing content for the peer assessment tool that will be used (e.g. criteria, ratings, scale, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
In general, peer assessment is a valuable way to develop employability skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment

**When RECEIVING feedback from a peer, which type of feedback do you find the MOST helpful in developing your employability skills? Please check only one.**

- Specific, written comments and suggestions.
- Examples to explain how improvements could be made.
- Numerical ratings of specific skills or behaviours (e.g., rate your peer's teamwork skills on a scale of 1 to 5 with 1 being poor and 5 being outstanding)

Comment

## Technology Supported Formative Peer Assessment - Pre-Course Survey

**When GIVING feedback to a peer, which type of feedback do you PREFER to provide?**

**Please check only one.**

- Specific, written comments and suggestions.
- Examples to explain how improvements could be made.
- Numerical ratings of specific skills or behaviours (e.g., rate your peer's teamwork skills on a scale of 1 to 5 with 1 being poor and 5 being outstanding)

Comment

**For this course, you will be assessed three different times (weeks 4, 8, and 12) and your peers will be responsible for determining 10 percent of your grade through peer assessment. What concerns, if any, do you have about the peer assessment process that will be used?**

**What do you like the most about peer assessment?**

**What do you like the least about peer assessment?**

### C. Technology & Peer Assessment

#### Technology Supported Formative Peer Assessment - Pre-Course Survey

**Have you ever used an online tool for peer assessment in an educational setting?**

Yes

No

If yes, what tool did you use?

#### Technology & Peer Assessment

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
In general, I am comfortable using DC Connect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Technology & Peer Assessment

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am confident in my ability to use the Discussion Forum in DC Connect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment

#### Technology & Peer Assessment

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am comfortable participating in the peer assessment process if I know that it will be anonymous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Technology & Peer Assessment

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am better able to provide honest, constructive feedback when I do it anonymously.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

#### Technology & Peer Assessment

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I prefer using an online tool to participate in the peer assessment process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Technology Supported Formative Peer Assessment - Pre-Course Survey

**Please use the comment box below to make any additional comments regarding peer assessment and the development of employability skills.**

A large, empty, light blue rectangular comment box with a vertical scrollbar on the right side. The box is intended for users to provide additional comments regarding peer assessment and the development of employability skills.

Appendix E – Post Course Survey

### Technology Supported Formative Peer Assessment - Post-Course Survey

Participation in this research study is voluntary and confidential. You may withdraw from the study at any time by closing your browser prior to survey completion or by submitting your SIC via email to the researcher within one week of the final grades being released by the college.

**Student Identification Code (SIC)**

### Technology Supported Formative Peer Assessment - Post-Course Survey

#### B. Peer Assessment Experience & Perceptions

**Peer Assessment Experience & Perceptions**

In general, I have had positive experiences with peer assessment.

Strongly Agree    Agree    Neither Agree nor Disagree    Disagree    Strongly Disagree

**Peer Assessment Experience & Perceptions**

I am confident in MY ability to fairly assess my peers' employability skills using a ratings scale (e.g., rate communication skills on a scale of 1 to 5).

Strongly Agree    Agree    Neither Agree nor Disagree    Disagree    Strongly Disagree

Comment (optional)

**Peer Assessment Experience & Perceptions**

I am confident in MY ability to make specific, constructive comments on my peers' employability skills.

Strongly Agree    Agree    Neither Agree nor Disagree    Disagree    Strongly Disagree

Comment (optional)

## Technology Supported Formative Peer Assessment - Post-Course Survey

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am confident in my PEERS' ability to fairly assess my employability skills (e.g., rate communication skills on a scale of 1 to 5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am confident in my PEERS' ability to make specific, constructive comments on my employability skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I receive specific, constructive comments on my performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I am given examples to explain how improvements can be made.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I learn better when I have discussions with my peers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Technology Supported Formative Peer Assessment - Post-Course Survey

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Peer assessment is a fair way to grade an individual's contribution to a group project.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Participating in peer assessment helps me understand what my peers expect of me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Participating in peer assessment helps me communicate what I expect of my peers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I understand how peer assessment relates to working in a professional environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
It is important for students to be involved in developing content for the peer assessment tool that will be used (e.g. criteria, ratings, scale, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Technology Supported Formative Peer Assessment - Post-Course Survey

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
In general, peer assessment is a valuable way to develop employability skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

### Peer Assessment Experience & Perceptions

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I would participate in a peer assessment process like this again.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

### When RECEIVING feedback from a peer, which type of feedback do you find the MOST helpful in developing your employability skills? Please check only one.

- Specific, written comments and suggestions.
- Examples to explain how improvements could be made.
- Numerical ratings of specific skills or behaviours (e.g., rate your peer's teamwork skills on a scale of 1 to 5 with 1 being poor and 5 being outstanding)

Comment (optional)

### When GIVING feedback to a peer, which type of feedback do you PREFER to provide? Please check only one.

- Specific, written comments and suggestions.
- Examples to explain how improvements could be made.
- Numerical ratings of specific skills or behaviours (e.g., rate your peer's teamwork skills on a scale of 1 to 5 with 1 being poor and 5 being outstanding)

Comment (optional)

## Technology Supported Formative Peer Assessment - Post-Course Survey

**What do you like the most about peer assessment?**

**What do you like the least about peer assessment?**

### C. Technology & Peer Assessment

**Technology & Peer Assessment**

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
In general, I am comfortable using DC Connect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Technology & Peer Assessment**

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am confident in my ability to use the Discussion Forum in DC Connect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment (optional)

**Technology & Peer Assessment**

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am comfortable participating in the peer assessment process if I know that it will be anonymous.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Technology & Peer Assessment**

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I am better able to provide honest, constructive feedback when I do it anonymously.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Technology & Peer Assessment**

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I prefer using an online tool to participate in the peer assessment process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

PEER ASSESSMENT OF EMPLOYABILITY SKILLS

**Do you think your participation in the peer assessment process (e.g. completing assessments, participating in discussions) was influenced by DC Connect and if so, why?**

**Please use the comment box below to make any additional comments regarding peer assessment and the development of employability skills.**

**References**

- Association for Experiential Education (n.d.). *What is experiential learning?* Retrieved from [www.aee.org/about/whatIsEE](http://www.aee.org/about/whatIsEE).
- Baker, D.F. (2008). Peer assessment in small groups: A comparison of methods. *Journal of Management Education* 32(2), 183-209. doi: 10.1177/1052562907310489
- Ballantyne, R., Hughes, K., & Mylonas, A. (2002). Developing procedures for implementing peer assessment in large classes using an action research process. *Assessment & Evaluation in Higher Education*, 27(5), 427-441. doi:10.1080/0260293022000009302
- Bastick, T. (1999). Reliable and valid measurement of individual's contributions to group work. *Paper presented at the Annual Meeting of the Western Psychological Association* 79<sup>th</sup>, Irvine, CA.
- Beaman, R. (1998). The unquiet...even loud andragogy! Alternative assessment for adult learners. *Innovative Higher Education* 23(1), 47-59. doi: 10.1023/A:1022920513341
- Bloom, M. R., & Kitagawa, K. G. (1999). Understanding employability skills. *The Conference Board of Canada*, 257-99. Retrieved from <http://www.accc.ca/ftp/es-ce/257-99.pdf>.
- Bloxham, S., & West, A. (2004). Understanding the rules of the game: Marking peer assessment as a medium for developing students' conceptions of assessment. *Assessment & Evaluation in Higher Education*, 29(6), 721-733. doi:10.1080/0260293042000227254
- Boud, D. J. (1986). *Implementing student self-assessment*. Kensington, N.S.W.: Higher Education Research and Development Society of Australasia.
- Centennial College. (2014). *Employment Services*. Retrieved from <http://www.centennialcollege.ca/programs-courses/schools/school-of-advancement/employment-services.aspx>

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

- Cheng, W., & Warren, M. (2000). Making a difference: Using peers to assess individual students' contribution to a group project. *Teaching in Higher Education* 5(2), 243-255. doi: 10.1080/135625100114885
- Clark, I.D., Moran, G., Skolnik, M.L., & Trick, D. (2009). *Academic transformation: The forces reshaping higher education in Ontario*. Kinston, ON: Robert Sutherland Hall.
- Colleges Ontario. (2013). *Ontario Colleges Creating a Highly Skilled Workforce for the New Economy*. Retrieved from [http://colleges.ontario.org/outcomes/accountability/CO\\_WORKFORCE\\_Report\\_2013\\_WEB\\_Singles.pdf](http://colleges.ontario.org/outcomes/accountability/CO_WORKFORCE_Report_2013_WEB_Singles.pdf).
- De Graz, L., Valcke, M., & Roozen, I. (2012). How effective are self- and peer assessment of oral presentation skills compared with teachers' assessments? *Active Learning in Higher Education* 12(2), 129-142. doi: 10.1177/1469787412441284
- De Wever, B., Van Keer, H., Schellens, T., & Valcke, M. (2011). Assessing collaboration in a wiki: The reliability of university students' peer assessment. *The Internet and Higher Education* 14(4), 201-206. doi: 10.1016/j.iheduc.2011.07.003
- Dooly, M. (2008). Constructing knowledge together. In M. Dooly (ed.). *Telecollaborative language learning. A guidebook to moderating intercultural collaboration online*, (21-45). Bern: Peter LSang.
- Durham College. (2013). *Strategic Plan 2013 – 2016*. Retrieved from [http://www.durhamcollege.ca/wp-content/uploads/StrategicPlan\\_2013-2016\\_web.pdf](http://www.durhamcollege.ca/wp-content/uploads/StrategicPlan_2013-2016_web.pdf)
- Durham College. (2014). *Full Time Programs*. Retrieved from <http://www.durhamcollege.ca/programs-and-courses/full-time-programs-a-to-z>
- Falchikov, N., & Goldfinch, J. (2000). Student peer assessment in higher education: A meta-analysis Comparing Peer and Teacher Marks. *Review of Educational Research*, 70(3), 287-322. doi: 10.3102/00346543070003287

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

- Fellenz, M.R. (2006). Towards fairness in assessing groupwork: A protocol for peer evaluation of individual contributions. *Journal of Management Education* 30(4), 570-591. doi: 10.1177/1052562906286713
- Freeman, M. (1995). Peer Assessment by Groups of Group Work. *Assessment & Evaluation in Higher Education* 20(3), 289 – 300. doi: 10.1080/0260293950200305
- Gielen, S., Dochy, F., & Onghena, P. (2011). An inventory of peer assessment diversity. *Assessment & Evaluation in Higher Education* 36(2), 137-155. doi: 10.1080/026029330903221444
- Hamer, J., Luxton-Reilly, A., Purchase, H.C., & Sheard, J. (2011). Tools for “contributing student learning?”. *Inroads*, 2, 78–91.
- Herkert, J. (1997). Collaborative learning in engineering ethics. *Science and Engineering Ethics*, 3(4), 447-462. doi: 10.1007/s11948-997-00047x
- Humber College. (2014). *2014-2015 Full Time Programs*. Retrieved from <http://www.humber.ca/program/listings/a-z>
- Jin, X-H. (2012). A comparative study of effectiveness of peer assessment of individuals' contributions to group projects in undergraduate construction management core units. *Assessment & Evaluation in Higher Education* 37(5), 577-589. doi: 10.1080/02602938.2011.557147
- Johnston, L., & Miles, L. (2004). Assessing contributions to group assignments. *Assessment & Evaluation in Higher Education* 29(6), 751-768. doi: 10.1080/0260293042000227272.
- Kench, P.L., Field, N. Agudera, M., & Gill, M. (2009). Peer assessment of individual contributions to a group project: Student perceptions. *Radiography* 15(2), 158-165. doi: 10.1016/j.radi.2008.04.004

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

- Knowles, M.A. (1977). Adult learning processes: Pedagogy and andragogy. *Religious Education* 72(2), 202-211. doi: 10.1080/0034408770720210
- Knowles, M.A. (1984). *Andragogy in action: Applying modern principles of adult education*. San Francisco: Jossey-Bass.
- Lee, S.A. (2008). Increasing student learning: A comparison of students' perceptions of learning in the classroom environment and their industry-based experiential learning assignments. *Journal of Teaching in Travel and Tourism* 7(4), 37-54. doi: 10.1080/15313220802033310
- Liao, H. (2014). Examining the role of collaborative learning in a public speaking course. *College*, 62(2), 47-54. doi: 10.1080/87567555.2013.855891
- Liu, N., & Carless, D. (2006). Peer feedback: The learning element of peer assessment. *Teaching in Higher Education*, 11(3), 279-290. doi: 10.1080/13562510600680582
- Lombardi, M. (2008). Making the grade: the role of assessment in authentic learning. *Educause Learning Initiative*. Retrieved from <http://net.educause.edu/ir/library/pdf/eli2019.pdf>
- Luxton-Reilly, A. (2009). A systematic review of tools that support peer assessment. *Computer Science Education*, 19(4), 209 – 232. doi: 10.1080/08993400903384844
- Marlin-Bennett, R. (2002). Linking experiential and classroom education: Lessons learned from the American University-Amnesty International USA summer institute on human rights. *International Studies Perspective*, 3(4), 384-395. doi: 10.1111/1528.3577.t01-1-00101
- McShane, S. L. (2006). *Canadian organizational behaviour*. Toronto: McGraw-Hill Ryerson.
- Millenbah, K.F., & Millspaugh, J.J. (2003). Using experiential learning in wildlife courses to improve retention, problem solving and decision-making. *Wildlife Society Bulletin* 31(1), 127-137. doi: 10.2307/3784366

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

- Ministry of Training, Colleges and Universities. (2005). *Colleges of applied arts and technology policy framework: Framework for programs of instruction*. Toronto, Canada: Queen's Printer for Ontario. Retrieved from [www.acc.ca/wp-content/uploads/archive/es-ce/MTCUCollegeFramework.pdf](http://www.acc.ca/wp-content/uploads/archive/es-ce/MTCUCollegeFramework.pdf).
- Orsmond, P., Merry, S., & Callaghan, A. (2004). Implementation of a formative assessment model incorporating peer and self-assessment. *Innovation in Education and Teaching International*, (41)3, 273-290. doi: 10.1080/14703290410001733294
- Pare, D.E., & Joordens, S. S. (2008). Peering into large lectures: Examining peer and expert mark agreement using peerScholar, an online peer assessment tool. *Journal of Computer Assisted Learning*, 24(6), 526-540. doi: 10.1111/j.1365-2729.2008.00290.x
- Partnership for 21<sup>st</sup> Century Skills. (2007). The intellectual and policy foundations of the 21<sup>st</sup> century skills framework (white paper). Retrieved from [http://route21.p21.org/images/stories/epapers/skills\\_foundations\\_final.pdf](http://route21.p21.org/images/stories/epapers/skills_foundations_final.pdf)
- Ploegh, K., Tillema, H.H., & Segers, M.S.R. (2009). In search of quality criteria in peer assessment practices. *Studies in Educational Evaluation* 35(2/3), 102-109. doi: 10.1016/j.stueduc.2009.05.001
- Prins, F., Sluijsmans, D.A., Kirschner, P.A., & Strijbos, J. (2005). Formative peer assessment in a CSCL environment: a case study. *Assessment & Evaluation in Higher Education*, 30(4), 417-444. doi: 10.1080/02602930500099219
- Rushton, C., Ramsey, P., & Rada, R. (1993). Peer assessment in a collaborative hypermedia environment: a case study. *Journal of Computer-Based Instruction*, 20(3), 75-80.
- Ryan, G. J., Marshall, L.L., Porter, K., & Jia, H. (2007). Peer, professor, and self-evaluation of class participation. *Active Learning in Higher Education: The Journal of the Institute for Learning and Teaching*, 8(1) 49-61. doi: 10.1177/1469787407074049

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

Seneca College. 2014. *Your Study Options*. Retrieved from <http://www.senecac.on.ca/program/index.html>

Sluijsmans, D.D., Dochy, F. F., & Moerkerke, G. G. (1999). Creating a learning environment by using self-, peer-, and co-assessment. *Learning Environments Research*, 1(3), 293-319. doi: 10.1023/A:1009932704458

Smith & Kendall. (1963). Re translation of expectations: An approach to the construction of unambiguous anchors to rating scales. *Journal of Applied Psychology*, 47, 149–55. doi:10.1037/h0047060

Survey Monkey. (2014). *How It Works*. Retrieved from [https://www.surveymonkey.com/mp/take-a-tour/?ut\\_source=header](https://www.surveymonkey.com/mp/take-a-tour/?ut_source=header)

Thompson, D., & McGregor, I. (2009). Online self- and peer assessment for groupwork. *Education & Training*, 51(5/6), 434-447. doi:10.1108/00400910910987237

Tillema, H., Leenknecht, M., & Segers, M. (2011). Assessing assessment quality: Criteria for quality assurance in design of (peer) assessment for learning--A Review of research studies. *Studies in Educational Evaluation*, 37(1), 25-34. doi: 10.1016/j.stueduc.2011.03.004

Topping, K. J. (1998). Peer assessment between students in colleges and universities. *Review of Educational Research*, 68(3), 249-276. doi: 10.3102/00346543068003249

Topping, K. J. (2009). Peer assessment. *Theory Into Practice*, 48(1), 20 – 27. doi: 10.1080/00405840802577569

van Zundert, M., Sluijsmans, D., & van Merriënboer, J. (2010). Effective peer assessment processes: Research findings and future directions. *Learning and Instruction*, 20(4), 270-279. doi: 10.1016/j.learninstruc.2009.08.004

## PEER ASSESSMENT OF EMPLOYABILITY SKILLS

- Vickerman, P. (2009). Student perspectives on formative peer assessment: an attempt to deepen learning? *Assessment & Evaluation in Higher Education*, 34(2), 221-230. doi: 10.1080/02602930801955986
- Watson, C. (1971). *Innovation in higher education Canadian case study: New college systems in Canada*. Department of Educational Planning. Toronto, ON: The Ontario Institute for Studies in Education.
- Welsh, M. (2012). Student perceptions of using the PebblePad e-portfolio system to support self- and peer-based formative assessment. *Technology, Pedagogy, and Education* 21(1), 57 – 83. doi: 10.1080/1475939X.2012.659884
- Wiggins, G. (1989). A true test: toward more authentic and equitable assessment. *The Phi Delta Kappan* 70(9), 703-713. doi: 10.2307/20404004
- Willey, K., & Gardner, A. (2009). Improving self- and peer assessment processes with technology. *Campus-Wide Information Systems* 26(5), 379-399. doi:10.1108/10650740911004804
- Willey, K., & Gardner, A. (2010). Investigating the capacity of self and peer assessment activities to engage students and promote learning. *European Journal of Engineering Education*, 35(4), 429-443. doi: 10.1080/03043797.2010.490577
- Willey, K., & Gardner, A. (2012). Collaborative learning frameworks to promote positive learning culture. *2012 Frontiers in Education Conference Proceedings*, 1-6. doi: 10.1109/FIE.2012.6462401
- Wright, M.C. (2000). Getting more out of less: The benefits of short-term experiential learning in undergraduate sociology courses. *Teaching Sociology* 28(2), 116-126. doi: 10.2307/1319259

PEER ASSESSMENT OF EMPLOYABILITY SKILLS

Xiao, Y., & Lucking, R. (2008). The impact of two types of peer assessment on students' performance and satisfaction within a wiki environment. *The Internet and Higher Education*, 11(3-4), 186-193. doi: 10.1016/j.iheduc.2008.06.005