Abstract

Experiential learning is an effective pedagogical tool for engaging students as they construct conceptual and practical knowledge in real life situations. This paper describes a model of experiential learning that moves beyond the learning cycle of experience, reflection and theory development, to view learning through the additional lenses of the curriculum, climate and community in which the student is engaged. The experiential learning model was developed at Ryerson University, Toronto, Ontario, Canada under the auspices of the Senate Learning and Teaching Committee, by faculty representing a broad range of disciplines. The model takes into consideration application, analysis, evaluation and creativity in experiential learning to promote transformational intellectual growth in the undergraduate experience.

Keywords: experiential learning, higher education, undergraduate experience

1 INTRODUCTION

Ryerson University, Toronto, Ontario, Canada was founded in 1948 as a polytechnic institute providing students with the opportunity to apply knowledge in their professional studies. Since its inception, experiential learning has been viewed at Ryerson University as an effective tool for engaging students as they construct and apply conceptual and practical knowledge in real life situations. To reflect current pedagogical practices in higher education, an experiential learning (EL) model was recently designed at Ryerson which moves beyond the learning cycle of experience, reflection and theory development, to view learning through the additional lenses of the curriculum, climate and community in which the student is engaged. This paper describes the Ryerson experiential learning model and discusses how experiential learning activities engage students in critical thinking, problem solving and decision making in contexts that are personally relevant and connected to academic learning objectives.

1.1 The Experiential History of Ryerson University

The end of World War II saw a flood of over 30,000 armed forces personnel return to Canada, many of whom required training or re-training to enter the workforce. By 1948, Canada had been a nation for only 81 years, had a population approaching 13 million people. The country won another Olympic hockey championship outscoring the opposition 69 – 5, and a house in the High Park neighbourhood of Toronto cost $15,000. Few Canadians were educated beyond the high school level and manufacturing operations were operated largely with unskilled employees [1]. Howard H. Kerr convinced the government of the province of Ontario to establish a training institute that would provide the education needed to support the growing economy and he became the first president of Ryerson Polytechnical Institute.

The polytechnical institute was named for Egerton Ryerson, a Methodist minister renowned for his support of free education and an early advocate of experiential education. He “advocated a diverse curriculum for primary schools, including not only the 3 Rs, but also subjects as varied as political economy, bookkeeping, experimental science and agriculture” [2]. Ryerson believed this would produce “well-rounded citizens who could help the nation advance” [2].

Classes at Ryerson Polytechnical Institute commenced on September 21, 1948 and were an immediate success. All courses were practical and each spanned two years with twelve-week periods of employment between the second and third terms. The early curriculum included programs as diverse as Radio Announcing and Production, Retail Merchandising, Cabinet Making and Design, Tool and Die Making, Printing Design and Layout, and Advanced Hair Styling. There was a far higher demand for graduates than Ryerson could meet, and enrollment increased very rapidly. “Consistent with the social experimentation of the late 1960s, Ryerson’s administration encouraged innovative
teaching techniques and produced a statement of philosophy that centred on the student and his learning experience – a combination of theory, hands-on experience and liberal arts studies – for the benefit and betterment of society” [1].

The second president of the university, F.C. Jorgenson, developed a philosophy statement that reinforced the value of experiential learning at the institute. “Adopt a philosophy of education which is student-centred and which stimulates flexibility, dynamism, progressiveness, and experimentation and which reflects the student’s rapidly changing needs in developing himself, in interacting with others, in adapting to the impact of knowledge and modern communications media, and in contributing to and benefiting from economic, social, and political growth in his community” (approved by the Board of Governors on September 25, 1968).

In 1993 the institution became Ryerson University. Today it is a member of the Association of Colleges and Universities of Canada and the Council of Ontario Universities. It has expanded from an initial enrollment of 520 students in 1948 to over 28,000 full time undergraduate students in 2012. Students are drawn to Ryerson because of the extensive theoretical and experiential learning programs, which include service learning, laboratories, fieldwork, clinical placements and the recently developed Digital Media Zone. At the time of the university’s 60th anniversary one writer declared “Experiential learning will always be Ryerson’s strength, and technology is simply a means to enhance it” [3].

1.2 An Overview of Experiential Learning

Experiential learning can be described as the outcome of a carefully designed mix of pedagogic and curricular strategies embracing varied learning challenges, activities and environments. Experiential learning as defined by Silberman is “the involvement of learners in concrete activities that enable them to ‘experience’ what they are learning and the opportunity to reflect on those activities” [4]. The objective of experiential learning is to provide an education that attends in some balanced manner to the student’s need to advance knowledge acquisition and critical judgement, thinking and acting, reflection and engagement, career development and informed citizenship, growth as an individual, and greater connectivity with the larger community. The ideal of an experiential education is to help students achieve these balances in a manner sensitive to the characteristics and needs of their individual disciplines, fields, and professions.

Kolb has noted, “In the field of higher education, there is a growing group of educators – faculty, administrators, and interested outsiders – who see experiential education as a way to revitalize the university curriculum and to cope with many of the changes facing higher education today” [5]. Joplin states an “emphasis and goal within experiential education is toward monitoring the individual’s growth and the development of self-awareness” [6]. Wurdinger and Carlson describe the guiding principles for effective experiential learning as “promoting hands-on learning, using a problem solving process, addressing real world problems, encouraging student interaction with each other and the content, engaging in direct experience, and using multiple subjects to enhance inter-disciplinary learning” [7].

Experiential learning can occur in the classroom, in specialized learning activities, in the community, the workplace and in international opportunities. David Thornton Moore states that while experiential education takes a number of forms “they all involve students in activities that look rather different from more traditional classroom-based methods” [8]. Students are able to explore theories and concepts through active learning and heighten their understanding of their learning through critical reflection. With cognitive reflection students examine the new knowledge and skills they have gained from their experiential activity. Students examine how their understanding of course materials and concepts has improved as a result of their participation in an experiential activity and what complexities they now see in the concepts that they were not aware of before. Through affective reflection, students consider what they feel as a result of their experience and how this experience has changed their attitudes, opinions or sensitivities. Finally, students consider what they have learned from the process itself as they examine how they work with others and the consequences of their actions.

2 BUILDING THE MODEL

Ryerson University’s academic plan manifests itself in at least three tangible ways that recognize our history as an institution of applied learning: innovative, professionally-relevant programs and associated scholarly, research and creative activities; distinctive learning and teaching, built on creative integrations of theoretical and applied knowledge, especially in lab, studio, clinical, and
workplace settings; strong relationships with external communities in the arts, business and industry, community agencies, and government and public sector organizations.

In order to accurately understand the scope and breadth of applied learning through experiential learning at Ryerson, in 2008 an extensive audit was conducted in each of the five Faculties. Initially there was some questioning as to the need for the audit since many programs at Ryerson have educated students for over 60 years and are well known for their experiential learning activities. Each Faculty has their own unique mix of experiential learning activities on which their reputation had been built. For example, the Faculty of Communication and Design's experiential learning ranges from dance classes, to service learning activities, to broadcast journalism, to internships and work placements.

A goal of the audit was to capture these activities as well as any others that were providing an effective form of experiential learning. As well, the audit captured each course that offered some form of experiential learning, whether the course was required or elective, when the course was offered, whether the EL activity was conducted off-campus and whether or not students were paid for certain forms of EL, for example co-operative education placements. To assist programs in capturing the data, the Experiential Learning Office at Ryerson provided a bank of initial data based on information from the university course calendar and statistics from the University Planning Office which provided accurate student counts. The initial data, which was compiled in spreadsheet format, was then distributed to all undergraduate programs through the Deans of each Faculty. They were tasked to review the spreadsheet and edit as needed. This process proved to be most effective in achieving maximum response to the inventory.

The data collection by programs took place over an academic year and involved numerous program queries and follow-ups. An experiential learning inventory was then compiled and distributed in three ways. At the micro level, data was provided on each program at the university. At the Faculty level, experiential learning data provided a snapshot of each Faculty as a whole and at the university level, the data provided a more macro view of experiential learning across the campus.

Some of the highlights of the experiential learning inventory were the number of experiential learning courses identified - 91% of all undergraduate programs or disciplines at Ryerson offer some form of experiential learning. Almost 40% of all of the courses offered at the university have an experiential learning component, with well over half of these courses being required. The inventory indicated that Ryerson has a depth and breadth of experiential learning that may be unmatched nationally. Thirty-four different types of experiential learning activities were identified, taking place off campus, internationally, on campus and in the classroom. The inventory demonstrated that student participation was highest in laboratories, case studies, problem based learning, studios, practicum and live actor simulations. The most frequent off campus experiential learning activities were co-ops, practica, field studies and internships.

As the inventory data collection was in progress, it became apparent that it would be useful to develop a model for experiential learning, which could be used by faculty and staff as a tool in developing or revamping experiential learning curriculum and programs. When creating the model, consideration was given to application, analysis, evaluation and creativity in experiential learning allowing for transformational intellectual growth.

The initial decision, after considering the experiential learning literature, was to use Kolb's model for experiential learning as the foundation from which we could build the model. In Kolb's model, “Immediate concrete experience is the basis for observation and reflection, these observations are assimilated into a theory from which new implications for action can be deduced and these implications or hypotheses are used to indicate new experiences” [9].

In Kolb's model learning is effective when students become actively involved and engaged in a concrete experience rather than simply watching it or reading about it. Then, using the process of critical reflection students then evaluate their experiences, analyze concepts and form opinions. They develop observations about their experience from many different perspectives and put facts, ideas and experiences together to derive new meaning and new knowledge, all while examining and questioning their own beliefs, opinions, and values. Students then create theories to explain their observations. Abstract conceptualization is the process of making sense of what has happened and involves interpreting the events and understanding the relationships between them. In order to frame and explain the experience, students must draw upon the theories, models and knowledge they have acquired throughout their education. Finally, students use the new understanding and new theories to solve problems, to make decisions, to influence or change situations, and to plan further active
experimentation. Thoughtful planning enables the learner to take new understandings in order to refine or revise their actions in new or similar experiences.

3 THE RYERSON EXPERIENTIAL LEARNING MODEL

3.1 Curriculum

The first lens of the Ryerson EL model is curriculum. Curriculum is iterative, intentional, integrative, and engaged. Experiential learning is most effective when there are opportunities to apply what has already been learned, so curriculum is iterative. Experiential learning achieves its potential value most effectively when there are a series of related opportunities over a reasonably sustained period of engagement, such as dance rehearsals leading to a performance. Often students work together in groups or teams to apply concepts learned in the curriculum. Students In Free Enterprise (SIFE) Ryerson, is one example of a program which brings together students interested in using concepts, knowledge and resources from their curricula, and provides opportunities for students to meet and participate in external competitions and extra-curricular initiatives which benefit their communities.

The experiential learning curriculum is viewed as intentional. Specific activities and experiences are developed intentionally to reflect the course and program curriculum. Experiences are developed as a deliberate means to advance particular learning objectives. Critical themes in a curriculum are explored in real life situations. Explicit opportunities are designated for critical thinking, reflection, problem solving and decision making. For example, student midwives learn how to incorporate research findings, counselling, and support for women and families within broad ethnic and socioeconomic populations, and apply these factors in the clinical portions of their education.

Curriculum is integrative as a process whereby the student experience is lived, reflected, and connected to theory. This allows a student to develop as a learner. When students reflect on their experiences, new abstractions are conceptualized and accommodated into theory as an integrated component of a curriculum. The learner is able to make their own connections between academic knowledge and practice.

The student is actively engaged with the curriculum in a context related to their future professions. Students are exposed to and design solutions to actual problems. The Ryerson Institute for Aerospace Design and Innovation (RIADI) provides undergraduate engineering students the opportunity to engage with aerospace industry collaborators, using project-based experiential learning. Active engagement in learning is a hallmark of experiential education at Ryerson University. This leads to record numbers of applicants for programs across the university and high satisfaction rankings on the National Survey of Student Engagement (NSSE).

3.2 Climate

Climate comprises the second lens of the Ryerson EL model. Climate is viewed as inclusive, adaptable, creative and participatory. In the EL model the interpersonal interactions, cultural norms and organizational expectations within the environment are viewed as important elements in defining the learning experience. Ekvall [10] defines climate as the recurring patterns of behaviours, attitudes and feelings that characterize an organization. Interactions between student, instructors, staff and administrators, which are inclusive, set the climate for learning and teaching. An inclusive learning climate is based on the principles of respect for diversity, equity and human rights. Cultivating inclusive interactions that value diverse learning and pedagogical styles ensures that each individual reaches his/her full potential.

In addition, the climate in the EL model is described as adaptable to allow for personalized outcomes and approaches. Adaptable interactions, attitudes and behaviors promote outcomes that are purposeful and fully accessible to the individual needs and requirements of the learner.

Ekvall's ten dimensions of creative climate also prevail in the Ryerson model [10]. In order for an experiential learning climate to foster student creativity there must be an atmosphere in which decisions, conflict, motivation and learning are positively handled. Without Ekvall's creative climate dimensions of dynamism and trust, individuals hesitate to invest in the process of learning. Students need to have a range of concrete experiences, support for their ideas, opportunities to express and manage risk, time to reflect on observations and interactions that acknowledge their unique
contributions to a project's outcome. It is in the establishment of a safe climate that the student is able to take risks and consolidate their knowledge in a new or similar context.

And finally a participatory climate encourages and enables students to share their individual experiences, conceptual reflections and methodological innovations. Participatory learners communicate with each other in order to aggregate their ideas and experiences in a way that will help them discover the connections between these experiences, contributing to their individual and shared learning goals. A participatory learning climate allows the student to be a full contributor and partner in the learning process and provides a motivational context for learning.

3.3 Community

From a constructivist perspective of learning and teaching we focus on community as an additional lens for conceptualizing experiential learning. Communities of practice are constantly forming and reforming within the experiential learning context as problems are articulated, decisions are formulated and evaluation of outcomes are completed. The EL model explores the many communities that impact on the learning experience from inside the university classroom and outside in the organizations and agencies in which students work, the locale in which the experience occurs, and the legislation or policies that impact the learning experience locally, nationally, and internationally. Global and societal communities must all be considered in support of educational experiences that are holistic, respectful of diversity and transformative.

Holistic education supports the capacity of individuals to change and develop through at least three domains of learning: cognitive, affective and psychomotor. The learning community impacts on the intellectual, emotional, physical and spiritual spheres of knowing. Sonnier notes that “holistic education is the process and product of teaching objectives which incorporate both the affective and cognitive domains” [11]. The term holistic education relates to the act of teaching and the act of learning as well as the social interactions between the two. The education of the whole person must be considered within a social context. The learning environment is enhanced by the experiential knowledge of learners and teachers.

The EL model incorporates the cognitive domain through critical thinking, questioning and problem solving and the affective domain through our emotional responses. The psychomotor domain of actively doing and the spiritual domain of knowing are also important to the model. Students may explore health, education, design and organizational issues in places such as hospitals, schools, public corporations or private sector organizations. They apply theory and seek resolution to authentic problems of individuals, families, children, and organizations. A baby is born, a child learns, a community plans for affordable housing, or a theater is built in an aboriginal community. The learning transcends the textbooks by allowing students to develop skills and to seek deeper meaning in life events.

The experiential learning process is transformative. Through a process of discovery and critical reflection, the learner's assumptions, beliefs and values are changing. Through analysis, application, problem solving, and creating the learner's practices change. But the community is also transformed. The building of knowledge through the process of discovery provides opportunities for progression in social and scholarly development. For example, early childhood students are supported by teachers in schools who enhance their understanding of curriculum design for young children, while at the same time even seasoned educators begin to explore perspectives that the student brings from the new theory and research that they are learning in their university courses.

In the many communities in which students and instructors interact, we come from a position of respecting diversity. This encompasses the dimensions of race, ethnicity, gender, sexual orientation, socio-economic status, age, physical and mental abilities, family status, educational background, religious and spiritual beliefs, and appearance. Respecting diversity is about moving beyond simple tolerance for one's differences and embracing and accepting the rich and unique dimensions of diversity contained within each and every individual.

4 DISCUSSION

The Ryerson EL model continues and expands the university's commitment to enhance student engagement and learning through authentic and concrete experiences. The EL model is a working tool which allows faculty to view experiential learning through Kolb's Learning Cycle as well as the additional lenses of the curriculum, climate and community. It provides a framework for the active
involvement of students in real life situations which blends theory and practice in an environment of trust and respect.

The EL model was developed by a team which included faculty members from a variety of disciplines. A consultative approach allowed the team to disseminate the model at various stages in its development to receive feedback from professors and administrators both within and outside of Ryerson. The EL model has been captured in an interactive video for use as a tool to facilitate discussion, evaluation and action. Table 1 provides a chronology of the development process.

Table 1 Chronological History of the EL Model

<table>
<thead>
<tr>
<th>Key Activity</th>
<th>Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data compiled and analyzed for Ryerson Experiential Learning Inventory</td>
<td>September 2008 – December 2009</td>
</tr>
<tr>
<td>Ryerson’s EL Inventory distributed</td>
<td>April 2010</td>
</tr>
<tr>
<td>EL website maintained providing an information link to assist faculty/staff as they develop and shape experiential learning activities, including how to incorporate EL in their course outlines and learning plans</td>
<td>January 2009 onwards</td>
</tr>
<tr>
<td>Experiential Learning Model developed by a subcommittee of Ryerson’s Senate Learning and Teaching Committee</td>
<td>January 2009 – March 2010</td>
</tr>
<tr>
<td>Student created a design to represent the model as an interactive web-based tool.</td>
<td>February 2010</td>
</tr>
<tr>
<td>Final version of model terms created</td>
<td>March 2010</td>
</tr>
<tr>
<td>Senate Learning and Teaching Committee evaluated the EL Model to assess the model’s potential for enabling effective and creative learning and to understand how experiential learning activities engage students in critical thinking, problem solving and decision making in contexts that are personally relevant and connected to academic learning objectives.</td>
<td>March 2010</td>
</tr>
<tr>
<td>Workshop on Critical Reflection and Assessment presented by Dr. Patti Clayton to support the EL Model development</td>
<td>March 2010</td>
</tr>
<tr>
<td>STLHE 2010 Conference presentation: “Looking Through the Lenses of an Experiential Learning Model”</td>
<td>June 2010</td>
</tr>
<tr>
<td>EL Model Video created as an effective means of delivering the model across the university</td>
<td>February 2011 – November 2011</td>
</tr>
<tr>
<td>Ryerson Faculty Conference presentation: “Focusing on the Lenses of an Experiential Learning Model”</td>
<td>May 2011</td>
</tr>
<tr>
<td>Poster session of the EL Model presented at the University of Windsor and Oakland University Teaching and Learning Conference</td>
<td>May 2011</td>
</tr>
<tr>
<td>Supporting materials published for the EL Model Video including “How to Use the Video”, “Interactive Components of the Video”, and “Looking Through the Lenses of an Experiential Learning Model”</td>
<td>October 2011</td>
</tr>
<tr>
<td>Interactive session with the Senate Learning and Teaching Committee introduced the EL Model Video</td>
<td>November 2011</td>
</tr>
<tr>
<td>A “short version” of the video created (including closed-captioned version) to be used for promotional purposes. Shown on-line at “Ryerson</td>
<td>November 2011</td>
</tr>
</tbody>
</table>
Today November 28, 2011

<table>
<thead>
<tr>
<th>EL Model Video distributed to all Deans, Chairs/Directors and Senior Managers along with supporting materials</th>
<th>December 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL Model video and supporting materials posted to website <a href="http://www.ryerson.ca/experiential">http://www.ryerson.ca/experiential</a></td>
<td>December 2011</td>
</tr>
</tbody>
</table>

The dissemination of the EL Model to the Ryerson community appears to be most effective through the distribution of the interactive video in both DVD and on-line formats. The video is intended to be viewed individually or in a group workshop format. Suggested participatory exercises which appear throughout the video provide an opportunity for discussion and allows for comprehensive understanding and reflection of the content. It is a useful and interactive resource for faculty, staff, students and the community.

The EL model is a resource that can benefit the creation of effective experiential learning experiences in higher education. Faculty can start by viewing current experiential learning opportunities through the lenses of curriculum, climate and community to see how they are applicable. Faculty and students can together build new experiences by thoughtfully considering the curriculum content, inclusive climate and community partnerships that are essential for a well defined experience. They can examine whether opportunities for active experimentation, analysis, reflection and application are supported by the curriculum, climate and community.

One limitation of the EL model is that it has yet to focus on critical reflection and evaluation as essential elements in the experiential learning process. The next step in the development of the model will focus on critical reflection. A Critical Reflection Subcommittee of Ryerson’s Senate Learning and Teaching Committee has been created to continue development of resources and best practices supporting the EL model. Faculty have identified the need to create purposeful approaches within the experiential learning context that promote analysis and critical reflection as a means to integrate curriculum content and assess learning. An evaluation of the effectiveness of the EL model in guiding faculty development and change is also required.

5 CONCLUSIONS

A challenge in higher education is how to motivate students who have been raised with television, the internet, and social media as primary and authoritative sources of knowledge. Traditional classroom and lecture formats for transmitting knowledge can no longer be the only pedagogical approach used in academic settings. Experiential learning opportunities that promote use of cognitive, affective, psychomotor and spiritual ways of knowing are more reflective of learners in the new millennium. It engages students as they analyze, evaluate and problem solve real world issues which are relevant to their future profession. Active involvement in learning is no longer considered an add-on, extracurricular or optional experience. Rather it must be regarded as an essential component of the learning process.

The Ryerson EL model incorporates the concepts of curriculum, climate and community to enhance our understanding and use of experiential learning in higher education. Consideration of the intersection of these critical components of the model can be an asset for faculty and students as they create, organize and implement experiential learning activities into their courses. Although the model has been developed as an experiential learning tool, many of the theories and practices are applicable to all methods of teaching; in other words, they could be considered universal best practices in teaching and learning.

REFERENCES

