Reflection and its Influence on Teaching and Learning: Applying Reflective Practices in a University Environment

Jarvis' (1998) definition and explanation of "reflective learning" from the context of a university environment is critical to understanding its influence on teaching and learning. In his description, Jarvis identified three approaches that could be used to achieve a state of reflection: 1) contemplation, 2) reflective skills learning, and 3) experimental learning. Contemplation "is the process of thinking about an experience and reaching a conclusion about it without necessarily referring to a wider social reality." The application of reflective skills learning involves the practice of reflection in various situations and environments where the learner begins to generate new skills over a period of time. The experimental learning approach for attaining a state of reflection allows the professor and learner to test theory by acquiring new knowledge that is gathered from a social and collaborative context. Jarvis' definitions and descriptions of these three reflective processes are compared with other theorists. As well, the process of reflective journaling is articulated through the presentiment of a case example that involved dialogue and discussion between a professor/advisor and a fourth-year communication internship student. This example demonstrated how the advisor and the student applied Jarvis' three types of reflective learning, as well as showed how the act of reflection was integrated into a student's academic work. A critical discussion is provided on how a university professor plays a role in facilitating the process of reflection when preparing students to become lifelong learners and social change agents.

Keywords*: reflection, contemplation, journaling, internship, communication, higher education*

Introduction

Ongoing research regarding *reflection* and its influence on teaching and learning requires continual and constant understanding, as well as closer examination with respect to how the act of reflection is applied in adult learning situations. Such investigation and observation can provide details about the actual expression of reflective practices within higher education. For this study, research questions included: What does the form and substance of reflection look like when applied to the learning activities of a university student? How does the practice of reflective journaling affect how an adult student contemplates, reflects, and experiments on acquired knowledge and learned experiences? Jarvis' (Jarvis et al., 1998) model defined the adult learning process by articulating its boundaries and parameters, which were organized into nine functions: 1) the person, 2) situation, 3) experience, 4) the person reinforced but relatively unchanged, 5) practice experimentation, 6) memorization, 7) reasoning and reflecting, 8) evaluation, and 9) the person

changed and more experienced (p. 55). According to Jarvis, learners were the starting point of this process. They then had the option to follow a chosen route, depending on their intended learning goal. It is this choice that allowed the learners to approach their adult learning in their own unique way. As learners advanced, they became engaged in recognizing, selecting, and applying these functions. Those students who chose Function 7, reasoning and reflecting, were provided with the opportunity to encounter a transformational experience. Within Function 7, Jarvis identified three types of reflection that were used by learners: 1) contemplation, 2) reflective skills learning, and 3) experimental (p. 55).

But how does Jarvis' (Jarvis et al., 1998) model fit into a real-life situation where reflective learning is occurring? This study included a case where Jarvis' three types of reflection were applied through the lens of a professor/advisor and a fourth-year undergraduate communication internship student at a university. The case study was based on their weekly progress meetings and was used as a forum where various approaches to reflection were applied by both professor/advisor and student. To establish a frame-of-reference for this case study, descriptions of the program, the professor/advisor, and the student are detailed and explained; as well, a description of a dialogue session between the professor/advisor and the student is presented followed by a critical analysis of the dialogue. This case study took place during an internship where the student was expected to apply his communication and writing skills. In this specific case, the student proposed to research, develop, and write a draft of a novel that he had begun when completing a major assignment in his script writing class during his third year of studies. The proposal was accepted, and a weekly meeting schedule was established which ran between January-August 2011. During these two-hour weekly discussions, reflective practices were used and were applied in assignment activities.

Literature Review

Following is a discussion of the literature that includes the theoretical underpinnings from various theorists who have examined reflection as it relates to students and professors in a higher education setting.

The Substance and Form of Reflection

Human curiosity is reflection. This curiousness commences when one is "aware of something someone says" or does that triggers reflective activity (Boyd & Fales, 1983, p. 106). As a result, there is a sense of inner-discomfort and a need to address its cause (p. 106). One method of inquiry that assists adult learners in testing the tenets of traditional and experiential knowledge is the process of reflection. Reflection enriches learners' abilities to reach deeper into their prior knowledge repertoires and to develop comprehensive layers of scaffolding within their "zone of proximal development" or "resting place"

(Vygotsky, 1978, p. 64; Boyd & Fales, p. 106). As such, the plethora of learning possibilities created by learners as a result of reflective activities are infinitesimal.

The Landscape of Reflection

The topographical *form* and *substance* of *reflection* are expansive, encompassing, artistic, and transformative. Form in reflection establishes order to thought, develops consistent patterns of judgment and defines criteria for quality assurance. Substance in reflection invites substantive inquiry, encourages critical debate, supports creative inspiration, and considers radical thought. Mezirow (1991) described the landscape of reflection as "the central dynamic in intentional learning, problem solving, and validity testing through rational discourse" (p. 99). The landscape of the reflective process offers clear pathways to its intellectual and imaginative features, reinforcing deep and critical thinking. As such, the adult learner has the option to embrace the process of reflection, which has the ability to influence thought and action. However, considerable discussion regarding this influence has generated various theories, and invited unique applications of the reflective process within the context of adult learning environments.

Examining Reflection Through the Lens of Theorists

The following section presents a critical discussion on Jarvis' (Jarvis et al., 1998) intentional shift in his understanding of reflection in adult learning and provides a comparison of his work in relation to Kolb's (1984) theory and Boyd and Fales' (1983) process of reflective learning. While Jarvis approached the process of adult learning and reflection from its most foundational reference point, his work was influenced by Kolb's Experiential Learning Theory (ELT). As such, this discussion provides insight and understanding regarding the impact of Kolb's influence on Jarvis' model of learning processes in relation to adult learning and reflective processes, as situated within the context of the university environment. Further, a discourse analysis that compares Jarvis' model with Boyd and Fales' definition and approach to the reflective process provides critical understandings about reflective practices in adult learning.

Jarvis' Shift and Reflection in Relation to Kolb

Jarvis' (Jarvis et al., 1998) shift in his perception of the processes of experiential learning conveyed a different viewpoint than that of Kolb's (1984). Expanding on Kolb's core ELT model, Jarvis' model included the learner as the critical start point. By overtly acknowledging the learner as the communicator who drove the decision-making processes of experiential learning, Jarvis understood how the learner was empowered through the need to determine his or her own learning processes as a result of experiences or

situations. His model also recognized that learners, in some situations, were unchanged from experience, and that not all learners converted their learning experiences into transformative ones. In order for learners to shift from a learning experience that had minimal impact to one that was influenced by experience, the level of commitment to and engagement in the activities of reasoning and reflecting had to be significantly high. Based on his model, Jarvis had revisited the definitions and uses of the concepts of "observations," "reasoning," and "reflection," comparing them with those of Kolb's and choosing to view them through different lenses. The result was the development of new perspectives and interpretations about adult learning processes. In Jarvis' model, learners were presented with the choice to experiment with, evaluate on, and memorize aspects of their experiences, depending on the relevance and meaning attached to these experiences. As a result, learners were deeply and critically changed through their experiences based on the encounters within and the influences of reflection, experimentation, evaluation, and reason (pp. 49-50).

The adult learning process of reflection articulated Jarvis' (Jarvis et al., 1998) shift in thinking. This was accomplished through his complex diagram (Figure 1) that mapped the various routes from which learners could choose, depending on whether they did or did not learn from an experience (pp. 49-50). Pairing the act of reason with that of reflection was a significant modification from Kolb's (1984) experiential learning cycle to that of Jarvis' comprehensive understanding of this process. As such, by positioning the act of reasoning prior to that of reflecting indicated which cognitive activity learners were initially engaged in. Hence, Jarvis believed that it was essential that reason and logic existed before reflection occurred. In addition to this ordering of activities, Jarvis situated reflection as the final process before learners chose to enter an evaluative state. Acknowledging the relationships between experience, practice experimentation, and evaluation demonstrated a deep contemplation about how and why humans required reflection in order to affect change. While all learners encountered experiences, reflection enabled them to transform what they learned into meaningful situations and incidences. But why was it important for Jarvis to deconstruct reflection into sub-actions? Is not the act of reflection a basic function?

Postulating such a question required that Jarvis (Jarvis et al., 1998) reflect in-depth on adult learning processes. As such, Jarvis believed that the concept of reflection involved a complex cognitive human process. Hence, disseminating the layers inherent within reflective learning revealed critical states and stages that were strategically applied and implemented by learners. As a result, learners devised and developed a unique system of reflective methods that were used to assess the relevancy and meaning of an experience or situation. Jarvis explained that the process of reflection comprised other critical activities. The sub-process of contemplation provided the learner with the singular act of thoughtfulness based on "pure thought" that informed the nature of an experience but was not supported by broader social contexts (p. 54). Hence, contemplation was considered by learners to be an internal

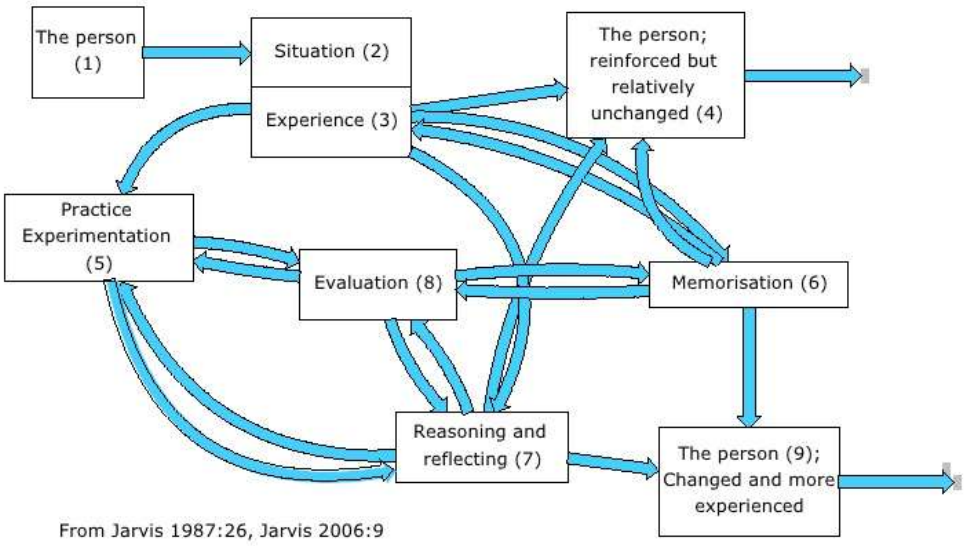
affirmation of their thoughts and was also used to ponder the stratum of these thoughts. In the state of contemplation, learners desired to comprehend a topic or event holistically. Thinking about a topic with seriousness enabled learners to explore the notion of this topic through definitive and declarative actions. If decisions and actions regarding the concept or topic were required, then learners had two options to consider: 1) reflective skills learning, and 2) experimental learning (p. 55).

Jarvis' (Jarvis et al., 1998) definition of the reflective skills learning process allowed learners to apply the practice of reflection in concert with decision-making acts that occurred daily, hourly, and momentarily (p. 55). Therefore, in-the-moment situations demanded quick responses that were guided by immediate and timely reflections regarding different aspects of the situation. Choice of resolution, judgment, assessment, and evaluation were other processes employed by learners in order to apply their reflective skills. The outcomes of these rapid responses and decisions demonstrated learners' understandings of the critical knowledge required to support these conclusions. The results of these decisions also created a repertoire of new skills that were subsequently used in and added to future and similar learning experiences, creating layers of knowledge that learners retrieved when engaged in swift decision-making processes. Reflective skills building was necessary for learners to act immediately if required, which also provided them with the choice to affirm their successful actions and practices. However, reflective skills learning did not necessarily allow learners to experiment directly with their newly grounded theories which were developed through common processes defined from a compilation of similar practices. Learners' decisions to select other sub-processes of reflection were conditional to their need to explore, test, and discover the practical features of these decisions.

According to Jarvis (Jarvis et al., 1998), experimental learning was "theory tried out in practice" (p. 55). In essence, learners tested their theoretical knowledge by applying it within the contexts of various experiences. In order to do this, Jarvis charted a specific route in his model that learners needed to follow before accomplishing this reflective state. Beginning with learners engaged within an experience, the expectation was that they first complete the processes of reasoning and reflecting before advancing to the practice experimentation stage and ending with learners evaluating the experience. Most notable within this route was the fact that the processes of reasoning and reflecting occurred before learners arrived at experimentation. In other words, learners reflected on past experiences and knowledge to inform and guide the level and depth of experimentation they initiated and reiterated within their experiences (p. 49).

Jarvis' (Jarvis et al., 1998) model (Figure 1) sought to identify and articulate the additional adult learning processes that occurred beyond those represented in Kolb's (1984) experiential learning cycle. By doing so, Jarvis' model advocated a higher level of transparency in an effort to establish a deeper understanding of adult learning processes that also included the process of reflection.

Figure 1. Jarvis' Model of the Learning Process



The Spiral of Reflection–Boyd and Fales

While Boyd and Fales' (1983) process of reflective learning did not elaborate like Jarvis' (Jarvis et al., 1998) model of learning processes, the similarities and differences were notable. In both their approaches, these researchers predominantly and commonly perceived the act of reflection as primarily being applied within a spiral process that allowed learners to move forward and backward in a coiled pattern and that enabled learners to successfully attain specific phases or levels of reflection. "Reflection was not a one-way, linear process; it was [perceived as being] more comparable to alternating current, flowing back and forth between intense focusing on a particular form of experience and outer experience; often triggered by some external experience, yet seriously hampered by high levels of external and internal demand to react" (Boyd & Fales, 1983, p. 105).

Resulting from their research, Boyd and Fales (1983) identified six components that comprised the process of reflective learning: 1) a sense of inner discomfort, 2) identification or clarification of the concern, 3) openness to new information from internal and external sources, with ability to observe and take in from a variety of perspectives, 4) resolution, expressed as "integration," "coming together," "acceptance of self-reality," and "creative synthesis," 5) establishing continuity of self with past, present, and future, and 6) deciding whether to act on the outcome of the reflective process (p. 106). Initiating the first phase of their reflective learning model required that learners became aware of internal uneasiness or distress that subsequently advanced them to the second phase of recognizing an issue or concern. This, then propelled learners to seek new information in the third phase that provided knowledge and insight into the issue which offered a choice of resolutions and

which provided learners an opportunity to connect past, current, and potential outcomes (fourth and fifth phases). The sixth and final phase required that learners make the decision to act on their reflections. This phase was critical to determining whether learners were motivated enough to transform their reflective learning meaning schemes into meaning perspectives through actions (Mezirow, 1991, p. 109). Hence, given these phases and conditions it could be postulated that the concept of movable reflective learning be extracted from this process. This movement could be metaphorically represented through the image of a coiled helix; learners control the motion and shape of the helix by using decisions that could be used to either progress or regress the process of reflection. In support of these movements, information could be gathered, contemplated, valued, and credited as learners transported their thoughts and ideas along the numerous pathways available to them. Such mobility could be recognized through the flexibility that was embedded within Boyd and Fales' phases of reflection which offered learners critical choices as they journeyed through their reflective activities.

Similar to Boyd and Fales (1983), this spiral form was also evident in Jarvis' (Jarvis et al., 1998) explanation of the different processes comprising his model. Closer examination revealed that Jarvis' three types of reflection demonstrated the various and different pathways that learners could employ in order to attain contemplative, reflective, and experimental states of reflection. These states were dependent on learners' goals and outcomes. For example, to achieve a contemplative state of reflection, Jarvis outlined a route within his model that allowed flexibility and adaptability for learners to select a path that would meet their needs. "For contemplation, the route was 1 to 3 to 7 to 8 to 6 to 9, with two-way processes operating throughout the latter part of the path" (p. 54). This ability to advance or reverse in the reflective sub-processes available to learners enabled them to shift from one state of reflection to another with strategic deliberation. Jarvis' model accommodated learners' preferences by presenting various alternatives from which they could select during their reflective passage. A sense of control regarding learners' choices in directing the substance and form of their reflection was clearly illustrated in Jarvis' model.

In terms of differences, Jarvis' (Jarvis et al., 1998) model provided considerable detail regarding adult learning processes that explored beyond the process of reflection; whereas, Boyd and Fales (1983) focused their process primarily on reflective learning. In stage seven of nine, Jarvis identified the learning processes that included the acts of "reasoning and reflecting" (p. 49). While this was an important aspect of his model, it formed only one part of the complex learning process that he described and depicted in his diagram. In fact, the act of reflection was combined with the cognitive activity of reasoning, establishing a concrete connection between these two actions. In contrast to Jarvis' holistic approach to adult learning processes, Boyd and Fales examined only one component of Jarvis' model. Conducting in-depth research on the awareness and use of reflection, Boyd and Fales identified six steps that learners applied as they progressed through their individual and "bumpy"

pathways of reflective learning (p. 106). They reiterated the "spiral" formation of reflection, recognizing learners' needs to revisit, rethink, and reconsider a concern or issue of interest. The cyclical pattern that learners experienced by re-examining this concern was demonstrated in a series of transformational steps that began with internal discomfort and ended with a desire to initiate a change based on their reflective learning. This comparison suggested that the layers comprising adult learning processes included a plethora of details, variations, and elaborations.

Methodology – Case Study

The Method and Design

A qualitative method was used for this research study, with a *case study* design that included weekly discussions between the professor/advisor and the student intern. Weekly journaling of learning activities was also completed by the professor and student to establish two reflective perspectives during the advising and learning processes.

In this specific case, the student proposed to research, develop, and write a draft of a novel that he had begun when completing a major assignment in his script writing class during his third year of communication studies at MacEwan University, Canada. The proposal document was accepted for his internship and weekly advising meetings were scheduled between January–August, 2011. During these two-hour weekly advising discussions, Jarvis' (1983) reflective practices were used when completing assignment activities before, during, and after the discussions.

The Environment, Approach, and Structure

Through shared discussions, the professor/advisor and the student intern developed a comprehensive plan to ensure that his academic learning and writing goals were met. Each meeting began with a general discussion about the progress and evolution of the new writing the student generated during the week. Reflective statements and questions were posed, considered, and responded to, allowing for both the professor/advisor and the student intern to contemplate broader issues and concerns about writing and story development. Then, the meeting focused on the new content that the student had written over the week, with an in-depth analysis of the plots, sub-plots, characters, and environments within the scene and book. After reading his new content and before meeting with the student intern, the professor/advisor created a written content analysis to be used for discussion and reflective skills learning during the meeting. This analysis was in the form of comments written on the student's work. Analysis was based on the following reflective criteria: 1) writing approach, 2) character development, 3) interconnectedness between characters, 4) relevance of events between scenes, 5) dialogue from character

to character, 6) use of rhetorical tools (style, voice, pace, schemes and tropes), and 7) word selection, definition, application, and relevance of content to the audience. These seven reflective criteria were used by the professor/advisor to facilitate and support reflective processes for the student.

It is this significant discussion and critique regarding the student's work that presented numerous and various opportunities where reflective activities were practiced and integrated into the learning session. Using a systematic approach to the discussion, the professor/advisor posed key and critical questions to the student, with the intent on initiating *reflective dialogue* with respect to his writing.

An Example of a Structured Weekly Advisory Meeting with Student Intern

Event: Weekly internship meeting with student intern to discuss new text added to the book that he was researching, developing, and writing in order to complete one of the requirements for his communication degree program.

Date/Time: Friday, May 13, 2011; 2:00 p.m. to 4:00 p.m.

Description: Each meeting began with the student opening his reflective writing journal that he created when he started to write his novel at the beginning of his internship year. The *reflective journal* was a natural development from the student, with no prompting from the professor/advisor to start such a journal. The student used his journal when he was filled with an idea; needed to remember parts of a scene; needed to make note of a specific piece of information at the meeting to discuss the details about a scene or other parts of his book; expressed his thoughts, ideas; and recorded decisions about his characters, their behaviors, and their interrelationships. The reflective journal was always open during the meetings to ensure that the student could write relevant points of content such as: the need to recheck the definition of a term; the recognition to do more research on a concept; the importance of understanding how or where to apply a specific rhetorical device.

The professor/advisor had a reflective journal, as well, making notes as the discussions evolved into observations and considerations of the student's work and of the student's responses to the questions that were posed regarding the student's written work. Additionally, the professor/advisor and the student used the method of storyboarding to visually reflect upon the changes that these reflective discussions generated as a result of decisions about characters, plots, and sub-plots within the story. The storyboarding was a highly effective way to apply the first two stages of Jarvis' (Jarvis et al., 1998) model: 1) contemplation, and 2) reflective skills learning. The technique of storyboarding was also used by the professor/advisor and the student to move to Jarvis' third stage of reflection, which involved experimentation. Through various discussions, the student naturally began to experiment on the order of the chapters, the introduction of the characters, and the type of environment that the scenes were set within. This enabled rich discussions about the connections between the shape, form, and context of the novel.

Findings/Results of Case Study

Research Questions

Research questions: What does the form and substance of reflection look like when applied to the learning activities of a university student? How does the practice of reflective journaling affect how a university student contemplates, reflects, and experiments on acquired knowledge and learned experiences?

Research Findings

This case study provided examples of how the process of reflection can be integrated into university level learning. It also demonstrated how professors can include reflective activities in a practical way, set within the dialogue and discussion with a student. Jarvis (Jarvis et al., 1998) identified and named specific functions and roles for reflection:

contemplation, reflective skills learning, and experimental learning (p. 51). The following excerpts from a weekly advising meeting identifies where Jarvis' three types of reflective processes were used by either the professor/ advisor and/or the fourth-year internship student during their two-hour internship meeting and discussion.

According to Jarvis (Jarvis, et al., 1998), *contemplation was identified as the first stage of reflection.* Based on the idea that knowledge was pure thought, Jarvis determined that *contemplation* was a reflective activity where the individual considered information as it existed but did not analyze it for its worth and meaning. Hence, the act of *contemplation* involved the reading and acknowledgement of content on a particular topic or field of discipline. In the case of this professor/advisor and student dialogue and discussion, there were two interactive dialogues where the reflective act of contemplation took place.

In the *first* interactive dialogue, the student explained how he needed to present at least five chapters of his novel before he would be considered to meet with a book agent or publisher, when he was attending a writing conference. He described how he initially contemplated on this information while going home after the conference, not deciding on any action, but rather considering it. In the *second* interactive dialogue, contemplation took place when the student reflected on the definitions of 'magic' and 'compassion' in relation to characters in his novel. These acts of contemplation were entered into the student's reflective journal and made note of in the professor/advisor's meeting notebook.

1) *First Interactive Dialogue*: Student intern *contemplates* on his experience when conversing with another author at a Writing Conference event

Internship student:

"I learned how the Authors Pitch Camp worked. I immediately found it to be of great interest because I wanted to pitch my book idea. However, I also learned

that I would need a minimum of five chapters completed before any publisher would be interested in my work. So, on the way home, I contemplated on this information with respect to the idea of reworking my current manuscript into five definitive chapters. Once I got home, I had already decided that I would organize my current manuscript into five chapters so that it met the publishers' requirement in order for me to sign up for a one-on-one pitch camp session."

2) *Second Interactive Dialogue*: Student intern *contemplates* on two definitions

Internship student:
"As you know, when I write I work on three to five scenes at one time trying to coordinate the environments, the characters and their behaviors. In fact, upon your (the professor/advisor) suggestion, I used mapping software to map out the plot, sub-plots, environments, and characters so that I could keep track of them. *Two of the concepts that I reflected on involved 'magic' and 'compassion'."*

"Who will have the power of *magic* and at what level? I began with the two *mages*, Sara and Susan, who had continued their friendship from being classmates at the Academy. Sara came from a background that was poor; Susan had money. I have not made it clear yet as to who has the greatest level of power as a *mage*. I continue to *contemplate* and consider whether there should be a difference."

"However, I have shown a difference in their characters in other ways. Susan is slower to react in a situation, taking more time to think about a response; whereas Sara is quick to think and react in a situation. Both types of responses are needed during a crisis, depending on the scenario. I have also shown a difference in the way that each one shows *compassion* in a situation. Susan is more *compassionate* than Sara, but this has changed as the book has progressed. Initially, Sara's level of *compassion* is thin. But, she has learned to listen to and trust her gut feeling when in a crisis situation. I have tried to show this characteristic in the scene that I wrote this week."

As such, both uses of contemplation enabled the student to decide whether he wanted to proceed to Jarvis' next stage of reflection, *reflective skills learning***.** Applying reflective skills learning within an academic setting requires careful and strategic positioning. In order to advance a student to the next stage, it requires a situation or environment where a student must think on their feet (Schon, 1983). Such was the case with the student. Again, there were two situations where the student was faced with implementing immediate decisions based on his *contemplative reflections*. When the student had contemplated on information regarding the requirement of five chapters before meeting with an agent or publisher, he arrived at home that evening and was faced with making an immediate decision.

The student had to decide very quickly whether he was going to spend the entire night re-organizing into five chapters the work that he had done, or to not do any editing on them.

To make this decision, *the student drew upon three points of reference***:** 1) the state in which his current written work existed, 2) the criteria needed to

meet with an agent or a publisher, and 3) his willingness to spend the night reorganizing his work. The student reflected on all this knowledge and made the decision to proceed with reorganizing his work into more definitive chapters. As he implemented his decision, *the student also acquired new reflective learning skills* when reorganizing and reworking his written work so that it was more cohesive, so that it had a stronger flow from scene to scene and from chapter to chapter, and so that it created a substantial body of work that he had not necessarily recognized when he was working on different parts of his book previously.

The student understood that while he was not able to meet with someone at the conference to discuss his novel, he was able to experiment with the order of his scenes, how they flowed throughout the chapters, and how the characters would fit into these scenes. The student's style of writing was very dynamic and experimental, which was demonstrated through his decision to work on three to five chapters simultaneously. The student applied *experimental learning* when using the technique of storyboarding, which enabled him to experiment with character relationships, scene environments, and chapter order. As such, his approach created a natural platform where he was able to apply Jarvis' (Jarvis, et al., 1998) third stage of reflection: experimental learning.

Reflective Questions Asked by the Professor/Advisor During Internship Meetings

During the weekly scheduled internship meetings the professor/advisor asked specific and targeted questions that shifted the student from a contemplative state to one that required him to discover the importance of his book restructuring, which included both reflective skills learning and experimental reflection.

Table 1. Reflective questions asked by the professor/advisor during meetings

Beginning (10 minutes)	**Middle (90 minutes)**	**End (20 minutes)**
1) What have you done differently this week than what you have done in previous weeks? 2)What have you done outside of your writing that informs what you are doing in your writing? 3)What have you researched to support your writing this week?	1) Based on your new content, why did you or did you not change the environment of the scene? Why was it important to do so? 2) How have you changed the tone, voice, pace, or content of your scene? 3) How have these changes affected the relationships between your characters? 4) Are there any barriers (physical, mental, emotional, and cultural) that change the outcome of the scene? 5) For what purpose did you employ the following rhetorical device: alliteration, personification, onomatopoeia, metaphor, irony? 6) How does this rhetorical device support your character(s), story plot, sub-plots, pace, etc.?	1) Is your story line heading in the direction that you intended it to? Why or why not? 2) What changes do you see making as a result of our discussions and reflections regarding the scene as a whole? 3) What words need rethinking? 4) What rhetorical devices need to be more/less prominent

	7) These specific words elicit a particular response from the reader. 8) Why is this character prominent in this scene? How do other characters support this specific character?	in the scene? 5) How was this discussion helpful to continuing your work?

The weekly meeting ended with the student intern writing notes in his reflective journal and the professor/advisor writing the student's responses to the questions in a notebook. These notes guided each subsequent meeting to ensure there was an ongoing discussion as the development of the novel proceeded.

Discussion

Other researchers studied the relationship between the learner and reflection and how it affected learning outcomes. To further illustrate this relationship, Jarvis' (Jarvis et al., 1998) model was used as a point of reference to discuss and compare the process of reflection in relation to the viewpoints of these researchers. These numerous studies and applications that focused on reflective processes provided insight into the ongoing impact that reflection has had on faculty and student practices. As such, the following questions can be considered: What do professors need to consider in terms of teaching reflection in higher education? How do students develop and advance their reflective skills in a university environment? Following is a critical discourse about the process of reflection as it is learned and practiced within a university environment.

Reflective Learning in a University

When university level students enter the higher education environment, many are actively engaged in higher cognitive development through the processes of analytical and critical thinking (Piaget, 1973; Vygotsky, 1978; Kohlberg, 1973). In addition, Dewey (1963; 2003), Kolb (1984), Mezirow (1991), and Brookfield (1995) demonstrated in their studies the importance of reflection in relation to adult learning processes and experiential learning. These theorists explored the interrelationships between reflection and other concepts including experience, andragogy, learning styles, and transformative learning. According to these theorists, fostering reflective learning in a university environment required deep and critical thinking about the topic or event that students were experiencing. However, in order to implement reflective learning processes within a university's academic and social culture, critical infrastructures were needed to support the activities inherent within reflection. These structures include the professor's reflective viewpoints and practices, and the student's engagement in learning relative to reflection.

Professors' Reflective Viewpoints and Practices

In general, when professors integrate reflection into their teaching practices, typically change in their behavior occurs. Symbols of this change can be observed in their deliberative postures, their longer pauses between thoughtful sentences, and their marked level of attentiveness when listening to others' viewpoints. More importantly, however, language becomes one of the most potent indicators in how reflection guides professors' viewpoints and practices. Language is one of the key human instruments used to express ideas and reflect internal thinking processes. It is also a measurement of the progression of thought processes that are generated throughout discussions, debates, and dialogues. Vygotsky's (1978) research on language and thought demonstrated how these processes were fundamental to learning and expression (p. 64). As such, the role of professors is continually situated in experiences that include one of these forms of conversational exchange that occur between colleagues and students. Professors initiate this interchange of ideas by presenting philosophies, theories, and concepts and by opening the channels of debate for those who choose to participate. They also communicate their viewpoints by expounding on the past, present, and future states of the topic being discussed. When they share, compare, and contrast their ideas with others, this enables them to articulate important distinctions between historical and current knowledge related to a topic and discipline. Hence, this collaboration of thoughts generates critical opportunities for professors to reflect on their syntheses of this knowledge. Actively researching within their disciplines supports the deeper contemplation of their ideas and scaffolds the comprehensive layers of knowledge that contemplation offers to a thinking process.

According to Sugerman et al. (2000), facilitating reflective learning required the skills of assessment, observation, and listening, as well as involved being cognizant of individuals' feelings (p. 11). In relation to the role of professors, they were expected to be vigilant in evaluating students' physical and emotional states by continually applying a combination of nonverbal and verbal communication approaches in response to students' needs. For example, when professors are engaging students in a reflective activity such as discussing the philosophical underpinnings of ethical conduct in research involving humans, they are role modeling the application of reflection in a learning situation. In this situation, professors choose to use nonverbal communication techniques. "Personal presence, physical positioning within the group and physical attributes" (p. 11) are some techniques that could be applied to demonstrate the concept of reflection by employing a combination of hand signals, eye and facial expressions, and body language. Additionally, these techniques could also be filtered through culturally and socially accepted traditions. Hence, the role of the professor in teaching reflection could potentially be perceived as one that nurtures and fosters transparency of thought and deliberation. Sugerman et al. postulated that this role was especially critical where verbal communication in the classroom became the

median that allowed considerations, contemplations, and reflections to be exchanged between professor and students and that were subsequently transformed into palpable knowledge generated from this collaborative discussion. As well, they believed the application of tone, projection, and delivery techniques were crucial for a professor in establishing a reflective environment for students to engage in reflection. Verbal dynamics of the professor assisted in creating expectations and in entrenching the rules of engagement before, during, and after reflective dialogues.

However, in order to arrive at a state of reflective synthesis and to support its *form and substance*, professors typically choose to engage in the act of contemplation (Jarvis et al., 1998, p. 54). To achieve this state, they read, ponder, and listen to various authors' voices, positions, and approaches on a topic, absorbing these ideas and recognizing their ingenuity. This form of pure thoughtfulness guides and informs professors, enabling them to create their individual storehouses of knowledge that are unique to their own academic needs. These catchment areas of information allow them to develop an internal database where critical and meaningful information is stored for future reflective activities. In addition, this knowledge is accessible for professors who are prepared to progress to the next stage, which is the state of reflective skills learning (p. 55). To facilitate this stage, the classroom becomes the environment where professors hone and perform their competencies in reflective skills learning. As professors experience teaching and learning, they acquire new skills when applying instructional techniques, when building rapport with students, and when responding to students' questions during in-class discussions, debates, and discourses. The result is an anthology of related experiences that professors access when required to act or react to a learning situation. This collection of experiences provides practical evidence of the underlying concepts and principles that support a new skill. For example, professors who teach deductive and inductive fallacies in rhetorical discourse may experience learning this new knowledge through three methods (Corbett & Connors, 1999, p. 18). First, they may experience it as a learner who defines, describes, and applies these fallacies in various scenarios. Second, they may experience learning as a teacher who is tasked with explaining how these fallacies are found and used within various genres of writing and debate. Third, they may experience learning as educators who retrieve these knowledgeable experiences, reflect on their value, validity, and reliability in relation to the current experience, and understand the connections and correlations between them with respect to their underlying concepts. According to Warhurst's (2016) study, the practice of reflective journaling provided professors with a venue to articulate their experiences in teaching. "These journals contained examples of practice being enhanced through reflective interpretation of pedagogic principles into action" (n.p.).

As such, professors who are actively learning new skills while engaged in new teaching and learning experiences are supported by the reflections they generate during these experiences. Given the immediacy of interaction between professor and student in the classroom, the response time to offer ideas,

comments, or feedback is often instantaneous. Those professors who apply reflective skills learning to retrieve relevant information related to students' questions develop a high level of competency in responding to the immediate learning needs of a student. Constant and continual use of reflective skills while delivering lessons enables professors to deepen their understanding of how reflection shapes their teaching practices and student rapport and allows them to strengthen their capabilities in developing long term knowledge streams about a topic. Sharing and exploring these knowledge streams based on a series of reflective experiences creates a direct connection between professors' and students' perceptions of the same topic. This enriched interchange of experiences demonstrates the complex exchange of ideas that can occur in a classroom environment where thoughts are being expressed in the moment. For many professors and students, the application of reflection in learning often ends at this second stage. Moving to Jarvis' (Jarvis et al., 1998) third type of reflection requires that professors initiate and create a learning environment that promotes experimentation of the ideas that are being discussed during the lesson.

But how does a professor shift from an in-the-moment reflective skills stage to one that integrates knowledge and experience through experimentation? Why would a professor desire to reach this third stage of reflection when teaching a lesson? What strategies can a professor use to facilitate reflective experimentation in and outside of a lesson?

Shifting into reflection that is driven by experimental learning requires collaboration between contemplative and reflective skills learning. While reflection through contemplation contributes to professors' levels of comprehension regarding theoretical complexities and while reflective skills learning assists them in accessing previous reflections related to prior experiences and knowledge, reflective experimental learning integrates both knowledge and experience by exploring a topic through practice and trial-and-error teaching approaches (Jarvis et al., 1998, p. 55). Professors who have tested a theory through their own research or through practical use arrive at new perspectives about the concepts inherent within the theory or hypothesis. The knowledge gained from testing supports professors' critical understandings of these concepts which subsequently sustain the reflections they generate during this process. When reflections are created about a concept, professors draw upon this cache of information constructed through their own experimentations. As a result of acquiring this experimental knowledge through their own reflective learning, professors gain an additional perspective and attain a deeper understanding of a concept. They are then able to support their teaching knowledge by explaining how practice and experimentation are used to maintain their hands-on experiences, which can then be transferred to students through practical learning in the classroom. Therefore, professors' who achieve a level of reflection through experimental learning seek to apply in the classroom their reflective knowledge gained from contemplation and reflective skills learning. By demonstrating the act of reflection through experimental learning, professors open an additional level of reflection that

students can observe, consider, and then apply within their own academic environment. When professors examine and realize how experimental learning through reflection benefits their students as well as themselves, the results support successful learning for both groups. The case study presented within this paper is an example of how a professor/advisor and an intern student were able to create a reflective teaching and learning environment by using questions that allowed them both to experiment with the characters, settings, and word selections within the student's novel.

However, while the deconstruction of the process of reflection assists professors in understanding the components and layers inherent within its infrastructure as well as informs professors of the reflective methods available for its implementation, a holistic viewpoint of its *substance and form* must also be established to provide a cohesive conception of this process. The structure and pattern of reflection begins with the systems view that it is defined not only by its parts, but that it transcends the individual function of each part when combined (Capra, 1996, p. 19). Hence, when professors actively engage in reflection, they encounter the choice of initiating and participating in a combination of contemplative, reflective, and experimental learning. Each type of reflective learning offers an opportunity for professors to ponder and consider aspects of their teaching practices such as contemplating lesson content, applying reflective skills learning while delivering the lesson content to the class, and demonstrating experimental learning through kinesthetic activities. The potential benefits obtained through the inclusion of all three reflective sub-processes influence professors' teaching approaches, decisions, and forms of creativity both outside and within the classroom. While it is important for professors to reflect on their discipline knowledge, their interpretations and applications of this knowledge, and their instructional approaches to presenting this knowledge, it is also important to reflect on the effect that their reflective approaches have on student engagement and reflection. What entry points in teaching and learning facilitate the process of reflection for students? How do reflective processes enable professors and students to collaborate on ideas, concepts, and creativity?

Student Engagement in Reflective Learning

Reflection is fundamental to good teaching practices which are subsequently transformed into learning activities and demonstrated through successful student learning. Entry points in teaching and learning that facilitate engagement in reflective learning include critical analysis, self-assessment, and creative evaluation. For example, when management students from the University of Aalborg in Denmark were engaged in critical self-evaluation through journaling activities during a collaborative project with international students, Jensen (2008) discovered the learning value attached to this type of reflective process. During this project, Danish students wrote frequently in their journals describing, explaining, and reflecting on their learning experiences related to working in project management teams with international

students. Within these reflective journal entries, students identified their approaches to decision-making processes that were affected by the team dynamics, provided their descriptions of the role of the professor, and described their reactions when introduced to the international students. Key issues regarding prior knowledge and experience, language and culture barriers, preparation for the project, and project stress levels were revealed by students as potential challenges to learning. However, Jensen's research focused on interactions between students in a project-based learning (PBL) environment but did not address the process of reflective journaling outside of these parameters. It was Janesick (2004) who approached reflective journaling through the lens of individual students based on her understanding of how the act of reflection contributed to qualitative research processes (pp. 2-5).

Similar to Jensen (2008), Janesick (2004) also sanctioned the application and entrenchment of reflective journaling within university classrooms. More specifically, reflection was viewed as a fundamental skill that was required to perform rich and thick contemplative and deliberative discussions and debates between professors and students. With a decided focus on the teaching of qualitative research methodologies, Janesick identified four major cycles that were inherent within the process of conducting this type of research: 1) observation cycle, 2) interview cycle, 3) role of the researcher cycle, and 4) analysis cycle (p. 5). The researcher was expected "to train the mind, the eye, and the soul together" by experiencing a series of orchestrated reflective exercises that assisted students' evolution of their critical and deep-thinking processes inherent within thoughtful and introspective research (p. 2). Such interpretive and interactive study involved transformative learning, a process that used reflective thought processes and transitioned them into a plan of action based on student reflections that were articulated in their journal entries (Mezirow, 1991, p. 109; Brookfield, 1995, p. 99).

In support of reflective journaling, Brookfield (1995) initiated critical troubleshooting discussions with students about their monthly journal entries, expounding on the benefits of this type of reflective activity. By engaging students in this dialogue, Brookfield's goal was "to justify and ground changes of direction or procedure in the common themes that emerged from [the student's entries]" (p. 99). However, Brookfield also understood that some students were skeptical of the benefits gained from reflective journaling, and that these students viewed this practice as a process of imposed disclosure of their personal thoughts. As such, Brookfield managed this skepticism by instructing students to provide summaries of these daily entries of the week that described trends, observations, and themes they discovered within their recorded thought processes. This summarization process was preferable to students, given they naturally edited their raw, original journal scripts before disclosing them. Consequently, such student resistance to reflective journaling required critical consideration regarding various factors that may have affected this outcome. Some possible factors may have included a student's personality style preference such as introverted versus extraverted (Jung, 1921: 1971), a thinking style preference such as monarchic, hierarchic, oligarchic, and

anarchic (Sternberg, 1997, pp. 44-59), a learning style preference such as diverging, assimilating, converging, and accommodating (Kolb, 1984, p. 64), or a multiple intelligence entry point preference such as narrative, numerical, logical, existential/foundational, aesthetic, hands-on, and inter/intrapersonal (Gardner, 1999, pp. 188-198). Such considerations could also bring deeper reflection on how professors approached reflective practices within assignment development and structure, as well as in how the role of evaluation played a part of the assignment. But, how would a professor foster reflection in students through active participation? Is self-evaluation an important aspect of reflection?

Professors who conduct comprehensive research that results in creative and scientific dialogue generally understand the impact that they impose on students who are impressionable, curious, or skeptical about a concept or idea. When engaged in reflective learning processes, students explore, discover, and entrench their understandings of a concept or idea with the intended goal of being able to memorize, recall, and express this information. Additionally, when students are encouraged to contemplate, consider, reconsider, reflect, and postulate on these concepts or ideas through the process of synthesis, they enter a transformative state of learning. An integration of these thoughts allows students to construct words into ideas, develop ideas into narratives, and translate narratives into actions. For example, in the case study where the internship student is writing his novel, his reflective journal provided a safe place to express his contemplations, to reconsider the characters and scenes, and to deliberate and question the definitions and meanings of words.

A skillful professor can begin a conversation about a concept by presenting it holistically, first offering declarative knowledge in the form of definitions and descriptions that are designed to build new schema for the purposes of immediate storage and future retrieval (Smith & Ragan, 2005). It is at this entry point that the reflective skill of contemplation is engaged by students, enabling them to initially contemplate and consider this new concept or idea. Contemplation is the act of reflecting upon pure thought without expressing judgments or defaulting to pre-conceived observations and ideas. Students achieve this state of reflection when they decidedly remove prejudices, assumptions, and presumptions about a concept or idea and ponder its attributes, elements, characteristics, essences, and/or structures. Hence, introducing the act of contemplation in the classroom or as an assignment can be very useful when applied to student learning. For example, in the case study where the internship student is writing his novel, his reflective journal provided a place to express his contemplations, to reconsider the characters and scenes, and to deliberate and question the definitions and meanings of words.

When examining Kitchener and King's (1990) research in the context of adult education, it can be postulated that contemplative knowledge combined with reflective judgment skills provide the criteria for creating a zone of proximal development (Vygotsky, 1978, p. 64) where university students experience, analyze, and synthesize concepts and ideas that subsequently evolve into what Jarvis (Jarvis et al., 1998) identifies as the second and final

levels of reflection (p. 55). As such, these resultant levels allow students to activate their thoughts into classroom and real-world learning situations. In a university environment, students comprise the other component of classroom dialogue, accessing and applying prior knowledge to support and reflect on their ideas. The interchange between contributors during discussions or debates creates a dynamic interplay of ideas and thoughts that occur and evolve as the dialogue unfolds. During this exchange, students emulate reflective skills learning as the discourse advances in its depth of content, allowing the students to naturally progress from a state of contemplation to one where they are engaged in reflective skills learning. According to Jeong and Lee (2008), online students who possessed reflective learning styles and who were engaged in online discussion boards produced 44% more exchanges with others than those students who had an active learning style. They further indicated that student groups or classes that comprised a higher number of reflective learners were more likely to initiate critical conversation, dialogue, and discourse during discussions (pp. 662-663). Hence, this learning situation demonstrated the impact that reflective learners had on other types of student learning styles. Consequently, Jeong and Lee recommended that curriculum development, lesson planning, and lesson activity elaboration include reflective skills learning to support adult learning processes. But, what would these processes look like in an adult learning environment?

In his model, Jarvis (Jarvis et al., 1998) identified five steps in completing the reflective skills learning process. After students experienced a learning situation or event, they initiated the activities of practice and experimentation by employing a hands-on approach. The information that students gathered through various methods such as observations, interviews, discussions, and sensory perceptions was then analyzed by the students using the processes of reasoning and reflecting. Subsequent to reflection, students applied and evaluated the process to inform and guide them in understanding the meanings, implications, and potential changes resulting from their reflective processes (p.55). The reflective skills learning process involved students learning a skill while “thinking on their feet” (Schon, 1983, p. 55). While doing so, students accessed their short- and long-term memories to locate critical prior knowledge (Smith & Ragan, 2005) that supported the decisions needed at the time to ensure the learning process advanced. Included within this retrieval system was the support of theoretical knowledge that provided a basic groundwork from which students could access when faced with an immediate decision-making activity. As students performed this reflective skill, they created a comprehensive scaffold that enabled them to bridge their past learning and theoretical knowledge with the new skills that were being developed. Each layer of scaffolding was created through a combination of theory, practice, and reflection. For each practice and experimentation completed, students used reflective learning skills to contemplate on the theory that upheld the practice. Students also used reflection to review and compare the current practice or experimentation being performed, as well as to evaluate the process involved within these activities.

Example of Undergraduate Students Applying Jarvis' Three Types of Reflection

The following example provides insight into how Jarvis' (Jarvis et al., 1998) three types of reflection was applied in a university undergraduate program at MacEwan University, Canada. While teaching a third-year university writing class, this current researcher/author assigned students the task of applying the process of "structured writing" towards a piece of written work. The process involved six stages and each stage utilized a type of reflection that enabled the students to proceed from one stage to the other. In the first stage, students were instructed to read and contemplate on the process of structured writing which comprised the order and pattern of seven information types, and which constituted the substance of structured writing. As well, they were instructed to contemplate on the definitions and descriptions of forty block types that were used to define and differentiate the units inherent within written text (Horn, 1998). Students reflected on this information, focusing on its content and the interrelationships between its theoretical underpinnings, definitions, and descriptions. In the second stage, they were asked to systematically identify and determine the block type of each word or group of words that corresponded with one of the forty block types. Some typical examples of a textual block type included "comment," "fact," "analogy," "description," and "objective" (Horn, 1998). As students worked with the selected written text, they applied reflective skills learning by accessing and retrieving knowledge from the first stage, and by reflecting on the definition and description of the corresponding block type before applying it to a word or group of words. With the support of reflection, they were able to actively develop the new skill of identifying critical types of text that revealed gaps in logic. At the third stage, students were directed to determine the purpose of each block type that was identified within each sentence and paragraph, asked to explain the meaning that each block type conveyed, and instructed to decide whether the block type added or removed clarity in the meaning of each sentence and paragraph. At this stage, students experimented with the form and substance of structured writing. They identified the emerging patterns of thought that unfolded throughout the written work. This experimentation allowed students to reflect further on the order and arrangement of the ideas within the written work as well as the quality of words used to express these ideas.

Stages four, five and six of this in-class assignment applied all three types of Jarvis' (Jarvis et al., 1998) reflective states: 1) contemplation, 2) reflective skills learning, and 3) experimentation (p. 55). In the fourth stage, students discussed how each word and sentence contributed to the argument of each paragraph throughout the written work and identified any strengths or weaknesses apparent in this argument. They contemplated on the meaning and parameters of what constituted a contribution to an argument. Students also applied reflective skills learning when they determined the definition of a contribution, resulting in the development and acquisition of the new critical

thinking skill of *argumentation analysis*. In the fifth stage, the weaknesses identified in the argument were supported by adding accurate and reliable facts, statistics, or dates that were selected based on the credibility they brought to the meaning of the written work. Students applied their newly acquired reflective skill of *defining the parameters of a contribution to an argument* by experimenting with this knowledge and by implementing it in various formats such as adding details or data to determine which ones worked best to improve the argument. The sixth stage instructed students to rewrite the written work and to include the rationale for their changes. Within the context of this learning situation, Jarvis' three types of reflection were employed by students in the following ways: 1) as they retrieved theoretical knowledge they had contemplated and used to support their changes to the work, 2) as they reflected upon and utilized the new skills that were learned while defining the concept of a contribution, and 3) as they experimented with various types of possible changes that could be implemented to improve the work. Students were able to locate where there were gaps in the meaning of the work, and then were able to further support its words and ideas by adding statistical information such as the name of a study, a date, or a number that sustained the meaning of the work. The class ended with a discussion deliberating on the relationship between words and meanings, between fact and fiction, and between the validity and invalidity of propositions within an argument where that are combined to establish clear meanings and messages for various audiences. While it is evident from various researchers that reflection is important for university students, how do professors and students situate time for reflection? Where does the space for reflection begin and end?

Developing Lifelong Learners Through Reflection

Reflection informs and guides students in their day-to-day learning activities. The university environment is designed to facilitate students' long-term goals of knowledge acquisition. Students enter university with the expectation that change is a necessary component of progressive learning and that this change becomes grounded in their thoughts, ideas, perspectives, values, and beliefs. They also arrive with the notion that they can, if desired, become society's future change agents. As such, the mandate to affect societal issues, concerns, and viewpoints suggests the need for deep, reflective thinking processes that permeate students' learning over a lifetime.

Reflection supports and sustains fundamental cognitive functions that are used to scaffold the processes of deep and critical learning. It establishes a connection between internal and external thought patterns. It nourishes human cognition within an environment that is flexible, open-minded, and tolerant. It reveals significant gaps in thinking and purges ideas by exposing inequities in thinking forms. Reflection is neither right nor wrong but aspires to present fairness in discourse amongst professors and students. It challenges assumptions, opening forums for discussion. It allays fear of the unknown, delegating knowledge where its purpose is best applied. Reflection demands

attention, listens to all manner of ideas, and creates a platform for dialogue. The role of reflection in adult learning is complex and comprehensive and establishes a foundation from which students can draw upon as they build and advance their knowledge bases, their skills, and their understandings of their studies, work, and life situations. What role does higher education play in creating learners who understand and continue to apply throughout their lives the processes inherent within reflection? How does a university assist students in entrenching these reflective processes in their lifelong goal setting and decision-making?

One of the mandates of a university is to provide an environment of exchange where professors teach, and students learn analytical thinking strategies which also include reflective learning processes. Most curricula are designed to accommodate and encourage critical thinking: 1) through analyses that are articulated in various forms of methods of inquiry, 2) through discussion, debate, and dialogue that enable students to extend their ideas, and 3) through the dissemination of findings that are validated through research. While teaching the important skills of analytical and critical thinking processes are key focuses of universities, few curricula offer consistent opportunities and activities in learning that allow students to discuss the importance and nature of reflection, to define and describe reflective practices, and to identify when and which reflective processes occur as learning activities are being performed. Awareness of the application of reflective practices begins with professors who are actively engaged in this process. Those faculty members who practice reflection consistently, who use this process to inform their teaching practices, and who display this skill when teaching in the classroom also act as critical role models for students. Brookfield (1995) believed that when teachers embraced critical reflection, the awareness of their own adult learning processes supported the reflective practices that were applied in their teaching which were subsequently projected onto their students. However, this awareness is not always present. Professors' teaching approaches and techniques that are guided by reflection represent only one level of reflection that students have access to. This occurs only if professors engage in consistent reflective activity. If professors choose not to share reflections about a concept or topic, then students lose opportunities to develop their own reflective skills during the crucial development level of early adulthood. According to Kohlberg (1973), young adults (18-25) who reflected on their moral beliefs and values increased their abilities to engage in deep and critical contemplation and analysis which also affected their ability to act on decisions.

Engaging students more frequently in reflective learning processes requires that universities revisit the fundamental learning relationship between student and professor and the framework in which this relationship evolves. Universities need to collaborate with professors to develop strategies in teaching reflective practices and to establish best practices by including reflective activities within curriculum and course development as well as instructional delivery. Developing lifelong critical thinkers and reflectors at the higher education level creates a collectivity of learners who use reflection to

guide their decision making as future leaders within their communities. As such, reflection is one of the driving forces that initiates the discussion and debate for societal change. To illustrate the concept of lifelong learning and reflection, a closer examination of Phelps, et al.'s (2001) study revealed the critical importance of teaching reflective skills to university students. One of the results of the study was that future student teachers who were instructed to keep a reflective journal of their experiences while learning new computer skills were more likely to consider themselves as capable users of computers and subsequently were more likely to use computers in the classroom when delivering lessons (p. 488). In this case, the interrelationship between reflection and awareness of adult learning processes demonstrated the significant role and impact that reflective journaling played in preparing future teachers for the classroom. Consequently, the act of reflective journaling for these university student teachers affected how they perceived their abilities which potentially could affect the way their own students perceive their abilities. As such, the pattern of reflective learning is cyclical and warrants careful observation and attention to the function that reflection plays at all levels and types of learning.

What drives professors to explore a topic deeper through the process of reflection? What qualities of professors do students intuitively perceive, instinctually connect with, and passionately want to understand? Contemplating and pondering these questions begins with the development of curriculum and teaching strategies that support the internal thought structures of reflection and uphold the deep, human cognitive crevices of ideas. Both professors and students seek comprehensive answers to questions that require lifelong deliberation and reflection. As both groups proceed along this continuum of teaching and learning, some experience transformative learning which enables them to extend their knowledge into society and to take action on specific community needs, as required.

Conclusion

Reflection is human. It supports cognition, teaching, learning, and creation. Without it, humans become stagnant in their ability to respond to societal issues. Universities are positioned as critical venues to discuss, explore, deliberate, and reflect upon these issues and to act as forums where administrators, professors, and students can collaborate on understanding these issues with the potential to understand and act upon, if needed.

Consistently implementing the deep and critical process of reflection throughout all levels within universities influences their decision-making activities and assists them in understanding and bridging the gap between academic knowledge and community needs. Adult learning processes are supported by the process of reflection which provides a foundation of analytical and critical thinking. As such, reflection informs professors in their research methods, as well as in their teaching practices and approaches. The

benefits students receive from professors' constant applications of reflective activities in the classroom assist in deepening the structure and shape of the knowledge being taught. Hence, universities, professors, students, and communities benefit from the act of reflection.

Reviewing and reconsidering the nature of reflection and its impact on higher education requires thorough contemplation that can begin with a critical discussion paper designed to initiate dialogue between all stakeholders: administrators, faculty, students, and communities. This discussion would also provide considerable opportunity for these stakeholders to engage in reflective skills learning, drawing upon their abilities to 'think on their feet' (Schon, 1983). The responses gathered from this type of reflection would propel them to Jarvis' (Jarvis et al., 1998) third type of reflection which involves the experimentation of this new knowledge through conscientious implementation within the university and through collaborative integration within the community.

Social Conscience and Reflection

Reflection constitutes a part of human cognition which is manifested through university level teaching and learning, through lifelong curiosity for knowledge, and through the human need to respond to local, national, and global issues and concerns that affect small and large groups of people. When university professors and students are immersed in teaching and learning the theoretical and practical aspects of a human condition or situation, they intuitively access their knowledge and experience which is gained from book and practical learning and transfer this to community work where they aspire to make a difference. When a higher education institution recognizes the crucial role that reflection plays in developing a critical foundation for students to reflect on significant social issues such as sustainability, equity, diversity, and inclusion, it provides a crucial stage in learning that advances students in their thinking and comprehension of these concerns. This role is articulated and communicated through the administration and faculty who are dedicated to presenting ideas through critical and transformative reflection. It is precisely these acts of deep and thoughtful discussion that prepare students as future leaders and citizens.

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