

Establishing a Foundation for Reflective Practice: A Case Study of Learning Journal Use

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Introduction

A key role of higher education and one of the measures of its effectiveness is how well graduates can engage in critical and reflective thinking and apply these lifelong learning skills to problem solving in complex real world situations (Johnson, Levine, Smith, & Stone, 2010; Schön, 1983; The World Bank, 2003). The use of learning journals to encourage students to become more reflective and action oriented in their learning is not a new concept. The documented benefits are numerous (Moon, 2006; Andrusyszyn & Davie, 1997; Henderson, Napan, & Monteiro, 2004; Rose & Devonshire, 2004). The learning journal is most commonly seen as a way to help individuals to reflect on when and how they best learn, to engage in critical thinking, to make connections among ideas and between previous learning and new learning, to create new knowledge and theory, and through these processes, to become self-directed autonomous learners.

Learning journals were initially incorporated into the Master of Distance Education and E-Learning (MDE) program as a form of learner support, with the journal providing a framework for students to organize coursework samples, information, reflections, and ideas (Walti, 2004). In 2009, the digital learning journal was introduced as a formal learning activity into the Foundations of Distance Education and E-learning course (OMDE 601), with the explicit objectives of helping students become more reflective and self-directed in their learning, and to engage them in creating content while experimenting with the use of web 2.0 tools for this purpose.

This case study attempts to understand the digital learning journal as a tool to help students embarking on a graduate studies degree develop a strong foundation of reflective practice that will help them become more effective nimble learners and problem solvers in their studies and in the workplace. The case study is itself an example of reflective practice in that findings are considered in the context of planning further investigation and ways in which practice can be improved, in particular by providing instructional guidance to students in using their journals and assessing the learning journal as a formal assignment.

Methodology

Case studies are a popular form of descriptive, explanatory, and/or exploratory investigation in fields such as educational technology where questions of “how” and “why” are common (Willis, 2007, p. 212). Case studies involve collecting and/or choosing, organizing, and analyzing various types of data to better understand a particular phenomena in a real life setting. Hence, the case study is chosen as a method of investigation here because we want to know more about how learning journals promote the skills that we want students to develop in the MDE, how we might improve our practice in this regard, and how we might investigate these questions further. To this end, we examined the literature on learning journals, in particular, what research can tell us about the use of learning journals to build reflective and critical thinking skills with a goal of developing independent learners and reflective practitioners. We also reviewed the history, evolution, and purpose of the learning journal in the MDE program from the perspective of instructors. Experiential knowledge of instructors is documented in the form of a detailed description of the methods developed to guide students in using their journals and assess their work. The case study also includes the learner perspective based on a recent survey of MDE students about their perceptions of the effect of social media use, including that of learning journal wikis, on their learning experience and outcomes. The methodology used for the survey is described later in the paper in the section where the learners’ views are addressed.

Literature Review

In recent years, there has been considerable renewed interest in the practice of reflection (Herrington & Oliver, 2002). Boud, Keogh and Walker (1985) define reflection as: “those intellectual and affective

activities in which individuals engage to explore their experiences in order to lead to new understandings and appreciations” (p. 19). Andrusyszyn & Davie (1997) consider reflection to be “a personal process that evolves from the cognitive and affective synthesis of ideas and [one] that...may be strengthened through dialogue,” with the goal of constructing meaning through the reflection process (p. 120). Hatton & Smith (1994) describe reflection as “deliberate thinking about action with a view to its improvement” (p. 7).

Dewey (1916) describes five features of the reflective experience in practice:

- *Confusion and doubt*: learner is confronted with a new situation and/or experience
- *Conjectural anticipation*: learner begins to evaluate the situation and makes tentative assumptions or hypotheses
- *Examination, inspection, exploration, and analysis*: learner conducts a thorough evaluation of the situation
- *Elaboration of hypothesis*: learner further defines the hypothesis and begins to test it against facts
- *Testing the hypothesis*: learner recreates the situation in order to test the hypothesis (pp. 117-118)

According to Dewey, for a reflective experience to occur depends upon the degree of completeness and accuracy with which steps 3 and 4 (evaluation of the situation, hypothesis testing) are conducted.

Reflection also plays an important role in heutagogy, an emerging pedagogical theory in distance education (Anderson, 2010). In heutagogy, control of the learning process shifts from teacher to learner, making learning significantly more student focused. In a heutagogical approach to learning, students reflect upon the problem solving process, as well as the process they have gone through in solving the problem (Hase & Kenyon, 2000). This self-reflection in the form of double-loop learning helps prepare students for a future of lifelong learning, where the skill of knowing how to learn will be essential in a rapidly innovative workforce (Hase & Kenyon, 2007). By supporting learners in developing the capacity to learn in unfamiliar situations, educators can thus better prepare learners for the managing the complexities of a global and evolving work environments (Anderson, 2010; Hase & Kenyon, 2007).

In describing the role of reflective practice within the professions, Schön (1983) defines reflection in reference to 1) *reflection-in-action*, that is reflecting while in the midst of problem-solving, and 2) *reflection-on-action*, that is reflecting on the process of reflection-in-action (as a reflective practitioner). “When someone reflects in action,” writes Schön (1983), “he becomes a researcher in the practice context. He is not dependent on the categories of established theory and technique, but constructs a new theory of the unique case.” (p.68). Reflective practitioners engage in a dialogue of reflection with their situation, which allows them to engage in continuous self-education and lifelong learning as researchers-in-practice. Gibbs (1988) also finds that reflection plays an important role in experiential learning, as the process of reflection helps solidify experience in the learner’s memory, raising the potential for further learning.

Research by Candy, Harri-Augstein, & Thomas (1985) indicates that when students are not taught how to reflect and not provided subsequent guidance in reflective practice, they will not automatically practice or actively engage in reflection. Bourner (2003) notes that “developing students’ capacity for reflective learning is part of developing their capacity to learn how to learn” (p. 267). By teaching and guiding learners in the development of their reflective skills, educators thus support students in developing their capacity to learn and better prepare them for lifelong learning.

How then do we move instructional design away from a focus on content mastery and toward a focus on acquisition of higher order thinking skills (HOTS) and competencies such as critical thinking and reflective practice? According to Bergman (2009), a basic form of generating HOTS is to ask open-ended questions that require the student to reflect before responding rather than cite facts. Bourner (2003) recommends the use of *searching questions*, guiding questions that structure or scaffold the learner’s reflective process. In this way, the student is encouraged to think reflectively and to use questions as a way of developing meaning, which then leads to deeper learning.

Defining these guiding questions is critical in order to effectively support students in reflecting in their learning journals (Pulman, 2007). Hatton & Smith (1994) found that a useful strategy was “to engage with another person in a way which encourages talking with, questioning, even confronting, a trusted other” (p. 9). Rose & Devonshire (2004) report that instructor guidance by scaffolding feedback (i.e., formative and summative feedback) and providing prompts throughout the reflective process positively influences the quality and depth of student reflections. To support reflective practice in the classroom, Herrington & Oliver (2002) incorporate activities such as project problem-solving, online journals and diaries, discussion boards, and publication of findings (as a form of reflection-on-action). Hatton & Smith (1994) also identify numerous techniques for fostering reflection, from oral interviews and personal narratives to reflective essays based on practical experiences and journaling.

According to Moon (2010), a learning journal is primarily “helpful in personalising and deepening the quality of learning and in helping learners to integrate the material of learning...and is usually a vehicle for reflection” (pp. 2-3). Learning journals can also help learners to slow the learning pace, give them a stronger sense of ownership of their individual learning process, encourage development of meta-cognitive skills (Moon, 2006), support deep exploration into issues, encourage linking of theory to practice, improve

writing skills, support development of critical thinking and learner autonomy, and provide a mechanism for providing instructor feedback (Henderson, Napan, & Monteiro, 2004; Rose & Devonshire, 2004; Morgan, Rawlinson, & Weaver, 2006; Wolf, 2008). Case studies published by EDUCAUSE (2007) also found that the use of learning journals reduced incidents of plagiarism, helped predict a learner's overall classroom performance, and supported learners in developing technology skills.

Having established the benefits of reflective thinking and identified techniques for helping students develop the necessary skills for this practice, we turn our attention to assessment. There are those who argue that assessing learning journals is strictly subjective and is akin to assessing learner emotions (Moon, 2010). Hatton & Smith (1994) note that ethical issues can arise in assessing reflections and that the assessment activity must be carefully structured. Issues that should be addressed prior to assessing learning journals include identifying what should be assessed (process or product), how the journal should be graded (adequate or inadequate), who is responsible for developing the criteria for assessment, and what type of work should be assessed (written or oral) (Moon, 2006)

Bourner (2003) emphasizes that by assessing student work, educators are guiding the learning process by helping learners to reflect and thus learn through reflection. Churchill (2009) reports that students are more motivated and more likely to blog (and reflect) when their learning blogs are graded (p. 182). Moon (2006, 2010) recommends assessing learning journals if only to address the increasingly common phenomenon of the *strategic student*, who only completes minimum course requirements (i.e., only those elements that are assessed). Bourner (2003) proposes a two step assessment process: 1) identifying that the student is engaged in critical thinking, and 2) confirming that the student demonstrates reflective thinking, basing the assessment "on evidence of the capacity to interrogate experience with searching questions" (p. 270). Bourner states that one must look for evidence of reflective thinking, in particular through references to past and current experiences.

When assessing the final reflective product, most approaches recommend evaluating content based on a scale or level of reflection. Henderson, Napan & Monteiro (2004, p. 360, and based on Bain, Ballantyne, Packer & Mills, 1999, p. 60) examine levels of reflection starting from reporting and responding, then moving to relating, reasoning, and reconstruction. Surbeck, Park Han, and Moyer (1991) describe three categories of reflection for assessment, each monitoring the ability of the student to move from one category to the next as reflection deepens: 1) reaction, where students describe general reactions to the content and report on activities and any personal concerns or issues; 2) elaboration, where students further expand on their reactions in different ways, for example, by relating them to a specific event, example, or situation; and 3) contemplation, where students consider these reactions and elaborations in relation to their personal and/or professional life and world view (social, ethical, and moral).

Hatton & Smith (1994, p. 19, based on Smith, 1992) propose four criteria for identifying types of reflective writing:

- *Descriptive writing*: describes what has happened (not considered reflective)
- *Descriptive reflection*: considering multiple viewpoints and explaining what has happened by rationalizing or justifying reasons for the action
- *Dialogic reflection*: entering into a dialogue with oneself and/or others about an event or action, reviewing potential alternatives, and forming hypotheses
- *Critical reflection*: considering the social, political, and cultural factors that are influential within the context of the action

Additional criteria identified by Moon (2006) include: length, presentation, legibility, and number/regularity of entries; clear and objective description of events; clear relationship of content to the coursework and course objectives; and evidence of creative and critical forms of thinking and deep learning, as well as of speculation and willingness to reassess ideas and pursue further ideas and lines of questioning (p. 115).

This brief literature review has served to provide definitions of reflection and to establish the role of reflection in developing student skills for lifelong learning. It also establishes the importance of active guidance and assessment of reflection as a formal learning activity in order to encourage development of reflective skills and ongoing practice. Finally, the review identifies instructional strategies and assessment techniques for this purpose. We will now discuss how the digital learning journal is used within the Foundations course and MDE program.

Learning Journals in the MDE: Building a Foundation for Independent Learning and Thinking

The central focus in the online MDE program is on developing leaders in distance education and e-learning who are "active advocates" and who can "manage significant change processes" (Bernath & Rubin, 2006, p. 20). As such, it is important to develop lifelong learners who are reflective practitioners committed to continuous learning, self-education, and professional development. Toward this end, every course in the

program includes learning activities such as online collaborative group work, peer assessment, problem-based learning, and case studies - each activity designed to engage students and encourage deeper learning and thinking, reflection, and critical thinking. Throughout the program, students are actively engaged in creating content through discussion, presentation of ideas, and various forms of documentation.

From the launch of the MDE program in 2000, students have been required to present an e-portfolio that documents their progression through the program. The e-portfolio is essentially seen as “.....a passport to the professional world” which demonstrates “the student’s qualifications gained in the field and provides evidence of their competencies and skills gained in a variety of disciplines/roles” (Bernath & Rubin, 2006, p. 20). The e-portfolio must include two major components: 1) selected work samples and related material (e.g. papers, projects, instructor feedback, and a curriculum vitae), and 2) the learning journal that is the focus of this case study. Students use the journal to document their reflections about how and what they learn, and about their experiences in the MDE – and how these experiences have influenced the way they think and learn. In particular, students are guided in and encouraged to reflect on and record moments of insight, instances of connecting theory to practice, and the experience of constructing knowledge through connecting ideas and building on previous knowledge.

In the early stages of the MDE, the e-portfolio with its learning journal component was introduced as a project when students reached the capstone course, which is the final course before graduation. A voluntary online tutorial that provides guidance in how to create and use an e-portfolio and learning journal (in the form of a learning log) was developed (Walti, 2004), and students were encouraged to start building their e-portfolios when they entered the program. The results of these efforts were hit and miss. A small minority of students diligently built e-portfolios, both collecting work samples and documenting their learning, while others collected work samples but did not necessarily keep a journal. Many students waited until they reached the capstone course before beginning work on their e-portfolio and reflections.

The Foundations course instructors speculated that the learning journal could be a more effective teaching and learning tool in the MDE if it were formally introduced in the first course in the program so that students could be guided in developing reflective practice from the beginning of their studies. Further, it was clear that students needed explicit guidance and regular feedback in order to use their learning journals to develop the desired reflective and critical thinking skills, and that they would only adopt journaling as part of their regular learning activities if the significant time and effort they were required to invest was rewarded with receiving credit as part of their final grade for the course. These perspectives reflect a shift in instructor attitude and practice from a few years earlier when it was thought that the learning journal should be encouraged but not be formally assessed (Walti, 2004). However, experience with the capstone course and a more fully evolved MDE program, feedback from instructors, observations of student journaling, findings in the literature, and advances in web 2.0 technology all provided evidence that the learning journal represented a significant opportunity to more explicitly help students discover and develop reflective and critical thinking skills.

A Means for Reflective Thinking...Using Social Media

In January 2009, development and use of the learning journal became a formal assignment in the Foundations course, contributing 5% to the student’s final grade. In early 2010, this percentage was boosted to 15% of the final grade, a substantial enough portion to warrant students’ attention. A wiki is used for the assignment, allowing students to easily create a digital learning journal where different types of information, ideas, and resources can be organized and stored, and shared with instructors, and if they wish, their peers. Wikis also offer the flexibility to change and adapt content over time, easily accommodating the learning journal as an ongoing project that accompanies students throughout their graduate studies and beyond. Use of wikis as learning journals supports these future managers of distance education in creating their own content that is generated from reflecting on their classroom experience (readings on theory and practice, interactions with classmates), and their individual learning process. At the same time, students are using the Web 2.0 applications that will be a critical part of their tool kit in professional practice.

The learning journal assignment instructions include guidance in developing the journal, a description of the journal and its purpose, links to wiki resources (e.g., PBWorks and WikiSpaces), the assignment objectives, and a link to the grading rubric (see description below) which clearly defines the expectations for journal entries. Assignment objectives for students are as follows:

- Report on what has been learned within each course module and in the course overall
- Examine, analyze, and critically reflect upon the new knowledge acquired through the course, for example, by relating it to personal experience and existing knowledge and/or applying it to current problems or challenges
- Make connections between/among the course topics and understand how the connections made relate to the learner’s individual learning process
- Explore their own evolving ideas about and understanding of distance education and relate these to the course content
- Describe if/how module objectives and overall course objectives have been achieved

An important implicit objective, which becomes explicit through the guidance provided and assessment of work, is the establishment of journaling as a regular practice in critical and reflective thinking for students as they progress through the MDE program and beyond.

The first part of the learning journal assignment asks students to work in dyads to research wikis for their fitness of purpose as a learning journal tool and report their findings to the class. Many of the students are unfamiliar with wikis, and this exercise helps them to explore these tools in a non-threatening way by sharing the experience with another student. Through this exercise, they begin the reflective and critical thinking process by considering how they want to use their journals, what criteria are most important to them individually, which wiki might best meet their needs, and how their ideas compare to those of their peers. Once each student chooses a wiki, the student is required to set it up, post an initial definition of distance education, and provide the wiki link to course instructors. At this point, the student can begin writing in the learning journal. The activity of creating the learning journal in a wiki gives students practical experience in using web 2.0 technologies, and allows instructors to effectively monitor the student's progress within the course.

In each of the three units of the course, a checklist of activities to be completed is provided. Posting learning journal entries appears as an activity on this list to remind students to post their reflections. Specific "questions for reflection," which are intended to guide students in their journaling, are also provided in each course unit. These open-ended questions are intended to motivate students to move beyond a focus on content and passive acquisition of knowledge to a focus on process so that they can begin to actively direct and manage their learning. In attempting to respond to the questions, students start to reconstruct their learning experiences in the course in the context of personal knowledge. Many also begin to demonstrate that they recognize their learning processes such as moments of insight and connection of ideas. Within the journals, students are encouraged to experiment with different types of media (e.g., audio and video) as opposed to posting purely text-based journal entries. For example, some students choose to design and develop YouTube videos to document their reflections on module readings, interactions, and experiences, an approach that allows them to exercise their preferred learning style, or in this case, reflection style.

Providing Guidance in Learning Journal Development

Henderson, Napan & Monteiro (2004) note that providing feedback and grading reflective learning journals can be an arduous process for instructors. This is consistent with the experience of instructors in the MDE Foundations course. Although there may be ways to incorporate learning journals so that they are not so labour intensive, further investigation of factors that contribute to student engagement with the journal is necessary. With the current course design in OMDE 601, a significant investment of instructor time is required to help students to use their learning journals effectively. The activity is designed into the course in such a way that students can easily gain access to clear instructions and guidance, and instructors are available to help with technical as well content and process questions. Clear instructions and a link to an online tutorial for the full e-portfolio (including the learning journal) are posted in the classroom. A description of an e-portfolio, what kinds of material to include, why it is important to begin one early in the program, and how it will be assessed in the capstone course is included. Two weeks into the course, students are invited to a one-week MDE orientation program, where they can learn more about the e-portfolio and how they can immediately begin to develop one in preparation for the final capstone course.

For the Foundations course, students are expected to set up their wikis as full e-portfolios, and begin saving significant pieces of work, but at this early stage, the focus is primarily on the learning journal, and this requires careful instructor guidance. Instructors closely monitor the first group activity and post feedback to the class regarding each dyad's wiki research results. As students subsequently post the links to their wikis, instructors enter the individual sites and provide initial feedback on the design and any initial postings so that students are immediately rewarded for completing this task and any problems with set up are identified early.

Assessment of Learning Journal Content

Wikis allow instructors immediate access to student journals, and students can actively seek instructor feedback on their journal entries at any time. Once instructors become members of a student's wiki, they can set up their account profiles so that they receive an e-mail notification each time the student modifies the site. As well, students have access to the grading rubric from the time the assignment is posted so they can assess their own journals against these criteria. Approximately midway through the term, instructors give formal written feedback to each student on their journal including assigning a grade (which does not count toward the final grade but is a benchmark in determining the student's standing with his/her journal). The feedback is based on the rubric and explicitly addresses areas for improvement. This mid-term formative assessment provides students with an opportunity to think about and try to understand the process of reflective thinking, reassess and improve their own work and incorporate the feedback into subsequent journal entries. At end of term, the learning journal is formally assessed, again using the rubric, and each student receives written feedback on individual performance, as well as a grade that contributes toward the final grade for the course.

The rubric is a detailed assessment tool developed by Foundations course faculty that addresses four

aspects of the learning journal weighted according to their perceived importance by the instructors: knowledge and understanding (40%), presentation and communication (30%), timeliness and frequency of posts (20%), and technical aspects (10%). *Knowledge and understanding* refers to documentation of what was learned, including a reflection on the experience and process of learning. The student must go beyond a report of what happened (descriptive writing) to a reflection on what happened (descriptive, dialogic, and critical reflection) (Hatton & Smith, 1994). Instructors look for a progression in the development of meta-cognitive skills demonstrated by students being able to articulate how they learned, when they learned, and what kinds of experiences triggered the learning process. In this category, students are also assessed on their construction of new knowledge through connection of ideas and/or connection of theory and practice, an approach recommended by Boettcher (2006) for developing problem-solving skills through student development of content. As working adults, MDE students are often able to connect concepts in the course to real life situations at work, bringing innovative new approaches to solving problems or expanding in new directions. Often they discuss these insights and applications in the classroom conferences but their understanding and ability to make the same kind of connection going forward appears to be enhanced by reflecting on the experience in their journal.

Performing well in the *presentation and communication* category of the rubric includes the ability to communicate logically and clearly and use different kinds of media to present ideas, but students are also asked to demonstrate their progression of ideas, building on related thoughts and ideas over time. They are aided in this task by the questions for reflection that are posed in the conferences for each unit of the course, and part of their assessment in the presentation and communication category is their approach to these questions. Students are also assessed on the *timeliness and frequency* of their submissions. Regularly recording reflections is more likely to facilitate the kind of progressive development of skills, and construction of knowledge and ideas that is the goal of these activities. Finally, a small percentage of the assessment is attributed to *technical presentation*. Despite the language of the journal being less formal, often more “personal, tentative, and exploratory” (Hatton & Smith, 1994, p. 12) than in an academic paper, it is still important for students to demonstrate recognition of intellectual property and citation standards and writing that is free of grammatical errors and misspellings. It is equally important that students demonstrate the ability to share the content that they create by managing web 2.0 tools to successfully design clear and intuitive navigation paths.

Through the guidance and assessment processes described here, students are encouraged to adopt and continue the practice of journaling throughout the program and beyond. Returning to the larger picture, the mission of the MDE is to develop leaders in distance education, creative and critical thinkers who are lifelong learners committed to challenging assumptions and continuously improving practice. In the capstone course, the e-portfolio submitted as a final project must include a summative reflective statement that conveys how the student has developed personally and professionally while in the MDE, how the MDE curriculum has affected the student's evolution as a scholar and practitioner in the field, and a description of the student's goals and how the student intends to pursue these. If the learning journal assignment in the Foundations course is successful in meeting its goal of setting students on the path of becoming reflective practitioners, they should be well prepared to write this statement at the end of the program. That being said, in order to reflect on and continue to improve and refine our own practice as instructors, we want to better understand how students view the learning journal, how well they understand its purpose, and in what ways (if at all) they see it as contributing to their learning.

The Learner Perspective: A Survey

Although learning journals are widely accepted by educators as tools for critical thinking and reflection, as part of the case study, we wanted to better understand how students view learning journals, whether they see them as beneficial, and if they can identify specific ways in which learning journals support their learning. In the summer of 2010, a survey to investigate student perceptions of the use of these social media tools in the online classroom was conducted among all of the students who have participated in MDE 601 since September 2009 (five sessions, N=54) (Blaschke, Porto, & Kurtz, 2010). The online survey was developed using SurveyMonkey software. Students were asked to endorse (strongly agree to strongly disagree with options for non-applicability or no opinion) statements about the specific type of impact that Web 2.0 applications used in OMDE 601 (podcasts, video/YouTube broadcasts, live classroom sessions, mashups, and learning journal wikis) had on their learning (Survey statements about using the journal wiki are shown in Table 1).

Survey Results

Eighteen of 54 students responded to the survey (33.3% return rate), with 16 students indicating that they used the reflective learning journal (29.6% response rate). For the purpose of this case study, only the responses from those students who indicated that they used the learning journal wiki (16) are considered. To facilitate and simplify comparison of response patterns item to item, categories of endorsement were collapsed to three: agree (includes strongly agree and agree), disagree (includes strongly disagree and disagree), and no opinion. Table 1 shows the number and percentage of students in each endorsement category for all of the items that refer to the learning journal wiki.

Table 1. Data on Learning Journal Usage (Wikis) [n=16]a

Survey Statement	Agree % (n) b	Disagree % (n) c	No opinion % (n)
The experience of using wikis made me feel more connected to the instructor	56% (9)	25% (4)	19% (3)
The experience of using wikis made me feel more connected to other students	56% (9)	31% (5)	13% (2)
The experience of using wikis made me feel more connected to course content	75% (12)	19% (3)	6% (1)
The experience of using wikis helped me to better understand course material	75% (12)	12.5% (2)	12.5% (2)
The experience of using wikis made me further reflect on what I had read and/or experienced in class	87.5% (14)	0% (0)	2 (12.5%)
The experience of using wikis gave me a better understanding of my personal learning process d	93% (14)	7% (1)	0% (0)
The experience of using wikis made me think about how I think	81% (13)	13% (2)	6% (1)
Use of wikis enabled me to create new content d	87% (13)	0 (0%)	13% (2)
Use of wikis promoted collaboration between me and my classmates d	73% (11)	20% (3)	7% (1)

a: 18 students completed the survey; 2 responded that they did not use wikis for their learning journals

b: Strongly agree and Agree have been combined into one category (Agree).

c: Disagree and Strongly disagree have been combined into one category (Disagree).

d: One student skipped the question.

Survey findings reveal that within the group surveyed, almost all students who reported using the wiki agreed or strongly agreed that the reflective learning journal helped them understand their personal learning process (93%), reflect on what they had read and/or experienced in class (87.5%), and create new content (87%). The same students indicated that the learning journal helped them think about how they think (81%) and helped them better understand course material and feel more connected to course content (75%). A much lower percentage of these students agreed that the learning journals made them feel more connected to the instructor or to other students (56%), indicating that they differentiated among the types of effects that the learning journal had on their learning. Other results from the survey support this finding. Although the figures are not reported here, it is important to note that the survey turned up different endorsement patterns for learning activities other than the journal. For example, the majority of students who participated in a live classroom session agreed that this activity contributed to their sense of connectedness to the instructor; however, the same students indicated that a live classroom session did not contribute as strongly to those items that might be associated with the development and use of reflection and meta-cognitive skills (Blaschke, Porto, & Kurtz, 2010).

Discussion

The design and use of the Foundations learning journals is strongly rooted in early pedagogical practices established within professions that have traditionally used learning journals as a means for reflection. The fundamental difference lies in the design and scaffolding approach that MDE instructors have implemented and the technology that they have used. By requiring students to create a reflective learning journal at the start of the MDE graduate program and guiding them with a learner-centred approach, instructors encourage students to become independent and autonomous learners. Formative and summative assessment provides opportunities for students to learn from experience, and use of a transparent assessment rubric allows students to take greater control of their learning and performance. Guiding questions support students in beginning and extending the reflection process. Skills of reflective practice that are well established in this way will accompany students throughout their graduate program, and into the professional workforce.

In the larger picture, the Foundations' learning journal practice supports a heutagogical approach to teaching and learning, an approach "critical to life in the rapidly changing economy and cultures that characterize postmodern times" (Anderson, 2010, p. 33). Reflective learning journals help students build

upon their skills of reflection and develop their metacognitive skills so as to extend competency in reflection, but also capacity. In forming the habit of reflective practice, students venture into the unknown, attempt to find meaning in uncertain contexts, and to form their own ideas and hypotheses about what they have learned and how they have learned it. In this way, competency in reflection creates an opportunity for capacity. Although the survey sample for the case study is small, the findings do reveal important information about the learner's experience and perspective. It appears that students are able to attribute specific learning effects (e.g. skill development, reflection, connectedness, meta-cognition) to different kinds of learning activities (e.g., journaling). It also appears that reflective learning journals, as a form of learner-generated content, can support students in the development of meta-cognitive thinking skills, for example, by helping students become more aware of their thinking and learning processes. These preliminary findings indicate that from a learner perspective, the goal of using the learning journals to support students in developing skills of reflection, critical thinking, and meta-cognition is being achieved. Further investigation is required to better understand how students use their journals, how they make attributions about the effects of journaling and different types of instructor intervention on their learning, and what implications there might be for practice.

Conclusion

Findings from this case study indicate that learning journals provide real value in developing student skills for lifelong learning, while actively involving students in their individual learning processes by having them collect, organize, reflect on, and create content. Within a larger context, learning journals form a foundation of reflective practice, supporting the MDE in achieving its program objectives of producing distance education managers skilled in managing change. Findings presented here also indicate additional areas of research, for example, establishing whether students can distinguish which instructor practices support them most in becoming more reflective, reviewing the role of learning journals within the framework of the MDE (development of reflective thinking skills over the span of the graduate experience), and identifying critical incidents of learning in the MDE as demonstrated through successful transfer of this learning to the workplace.

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