

## **An integrative learning project in teacher education**

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### **Introduction**

The connection between how an instructor approaches teaching and how students learn is a compelling area of investigation that has implications for student learning and the outcomes achieved. Teaching and learning in any discipline involves decisions about ways of thinking, instructing, and assessing. It is recognized that the way instructors approach their teaching has an impact on how students will be engaged and take meaning from classroom learning experiences (Christensen Hughes & Mighty, 2010). Thoughtful pedagogical practice should be part of higher education classroom settings; in a Bachelor of Education Program, attention to meaningful practice is essential.

In higher education, there is an underlying assumption “that high quality learning depends not just on pass or completion rates, but on the nature of the knowledge, skills, and conceptual understanding that students have acquired during their degree course” (Entwistle, 2010, p. 19). Bachelor of Education (B. Ed.) programs offer courses that are usually taught separately from one another. This separation of courses is supported by specific discipline philosophies so that unintentionally, content from each course is delivered in isolation from others (Edwards, 2008). Course separation does not always encourage more complex connections between subject areas or the synthesis of knowledge beyond a particular discipline. Rather than fragmentation, we want to offer our pre-service teachers learning experiences and pedagogical opportunities that allow them to connect subject understanding and deepen their knowledge of their professional work. We also want to model integrative learning strategies for our pre-service teachers so that they can observe and also experience integrative learning for themselves with the aim that they will utilize it in their own teaching practice as a tool for student learning.

Post-secondary institutions recognize that their students can benefit from more intentional curricula that provide diverse and meaningful learning experiences, rich with integrative and applied learning. Research on integrative learning suggests that integrative learning opportunities can cultivate “essential student capacities, skills, and values” while also engaging them “with significant questions through multidisciplinary lenses and methodologies” that will “foster strong connections between academic learning and community-based and co-curricular learning (Hovland, Anderson & Ferren, 2015, p. 1). These goals are worthwhile to pursue; research also suggests that students’ experiences of new

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initiatives is equally worthy of consideration (ibid., 2015). How do new styles of instruction, forms of assessment, and interactions with faculty support the students in their work?

This paper explores the collaborative effort of two instructors in providing pre-service teachers with an integrative and authentic learning opportunity. We offer an overview of the literature and then describe our teaching context and the integrative learning project we undertook. In the methods section, we discuss the use of Schön's (1983) work on reflection to examine our pedagogy and our experiences. We share our individual teaching contexts and then consider the lessons we learned and suggest implications for conceiving further integrative learning projects in a teacher education program.

### **Integrative Learning: A Review of the Literature**

The provision of integrative learning opportunities is a growing area of interest in higher educational institutions. A broad concept, integrative learning refers to learning that is “connected – built across the curriculum and co-curriculum” (Werder, 2013, p. 248), and linked across programs, disciplines and fields (Klein, 2005). In describing the importance of integrative learning and studies, William Newell (2010) states “a mixture of integrative learning and interdisciplinary studies, appropriately conceived and well grounded in academic disciplines, constitutes the most effective education for a complex world” (p.8). Grounded in disciplinary work and real-world experiences, Newell declares that integrative learning opportunities provide students with the opportunity to understand complex issues, synthesize insights, and make thoughtful conclusions (ibid., p. 8). In the current educational environment that includes a knowledge explosion and an increasing focus on complex problems in our work and social lives (Klein, 2005, Repko, 2008), integrative learning is viewed as a useful strategy for engaging students.

Curriculum integration is a term that has received renewed interest and has been described as a means with which to meet the demands of 21st century learning (Spelt, Biemans, Tobi, Luning & Mulder, 2009). However, the idea of integrating subject areas is not a new idea. The concept of integrative learning was recognized as a term in the nineteenth century in psychology texts and expanded in its application and meaning to include a recognition of the natural connection between subjects in schools (Klein, 2005). In the twentieth century, the term evolved to include the goal of educating the “whole” student at the postsecondary level (ibid., p. 8) and meeting the social and personal needs of students in the K-12 system with a focus on the project approach. Continued research and thinking in the area of integrative studies often highlighted different terms and related concepts that became part of the learning context in K-12 school settings. These concepts included approaches that drew on one or more subjects and were sometimes labeled as “multidisciplinary” and “multi subject” or promoted as integrated studies, “integrated units”, and “skills across the curriculum” (ibid., p. 9).

Breadth and depth of learning continue to be hallmarks of quality education. As learning across subjects and programs becomes an essential component of a 21st century education, instructors are called upon to develop the ability in students to make, recognize, and evaluate cross connections among course contexts. However, there seems to be consensus that breadth and depth are not enough (Taylor Huber, Hutchings, Gale, Miller & Breen, 2007). As Carol Geary Schneider, president of the Association of American Colleges and Universities (AAC&U) argues, instructors are:

Taking seriously the fragmentation of knowledge, not just in [their] courses, but through the knowledge explosion in the world around us. Many of the most interesting educational innovations clearly are intended to teach students what we might call the new liberal art of

integration. Not only do these innovations invite students to integrate learning from different sources, they also provide models, frameworks, and practice in actually doing so. (2004, p. 7)

The value of integrative learning as an instructional strategy is that it can support student teachers in developing a holistic rather than a fragmented perspective on learners. Integrative thinking also facilitates a holistic approach to teaching. Teaching and learning experiences that are designed to align with learning outcomes will facilitate a coherent and pedagogically connected curriculum (Spelt, Biemans, Tobi, Luning, & Mulder, 2009) that can benefit all classroom learners.

While there is no single pedagogy or approach associated with integrative teaching, collaborative learning is a common pedagogical strategy associated with an integrative approach to teaching and learning (Daniels & Walker, 2001). It is an approach that involves groups of students working together to solve a problem, complete a task, or create a product. As an instructional method, it provides the opportunity for students to work together in groups on an assignment or project. In this approach, students can produce the individual parts of a larger assignment and then assemble the final work together, as a team. Whether for a semester-long project inclusive of a number of student learning outcomes, or a single question during class, collaborative learning can vary greatly in scope and objectives. Regardless of the strategies used, collaborative learning allows students to build their own learning through teamwork, shared perspectives, and interpersonal skills, while potentially encouraging them to go beyond their predicted individual potential (Nokes-Malach, Richey & Gadgil, 2015).

While the concept of integrated curriculum has been considered and practiced to varying degrees for many years in elementary schools, there are mixed messages about how to successfully implement this practice in teacher education programs (Ferguson-Patrick, Reynolds, & Macqueen, 2018). Ferguson-Patrick, Reynolds and Macqueen describe the challenges in integrating a global education perspective with subject specific courses in a teacher education program at a regional university in Australia. They found that an emphasis on the acquisition of content knowledge and concerns about related testing scores in core subject areas diminished the engagement of both teacher educators and pre-service teachers in integrating global perspectives in course offerings. As teacher education programs are tasked with providing pre-service teachers with knowledge to teach in current schooling situations and to anticipate future schooling programming, the authors call for a corresponding interest with curriculum integration.

Ideally, the current interest in 21<sup>st</sup> century learning skills should promote curriculum integration in teacher education programs. However, most programs have separate discipline courses taught in isolation. According to Steele and Ashworth, (2013), who investigated the integration of science and art in a Canadian pre-service teacher program, there is much research addressing the value of integration in general, but little research about the pedagogy that supports integrative learning in higher education. In their research carried out with pre-service teachers, they discovered that “there were not many opportunities for TCs [teacher candidates] to practice integration in their education studies” (ibid., p. 3).

### **Context, Methodology and Methods**

Although our faculty is small, as instructors we tend to follow the dominant pattern of teaching subjects and courses in isolation to each other. Pre-service teachers must complete study in foundational professional knowledge courses, curriculum methods courses in various subject areas, and knowledge of student diversity courses. Instructors generally teach courses in which they have expertise and help pre-service teachers decode content and the ways of thinking within a discipline or subject context. While some of these courses build upon knowledge developed in previous courses, there is no explicit way in which courses connect to each other or allow pre-service teachers to integrate understanding. In addition, the organization of courses in discipline specific contexts risks placing the focus on our teaching, rather than on student learning.

As teacher educators, we are aware of the responsibility that we have to our pre-service teachers to model the most effective and current teaching and learning practices. The experience of undertaking an integrative learning project with our classes for the first time encouraged us to reflect and consider the implications of our collaboration. Dewey (1933) and Schön (1983) “argued for a proactive and learner-centered form of reflection in which the practitioner becomes the owner of, and subject in, the process of his or her own reflection” (Wlodarsky, 2005, p.157). In her research, Wlodarsky found that reflection among faculty members can lead to changes in practice, but for changes to occur “critical reflection through professional dialogue has to start with authentic issues that college teachers have - the concerns, ideas, questions, and celebrations they have” (2005, p. 171). Critical reflection as a tool can support an awareness of the positive potential of change in beliefs and practices.

We were interested in our experience of collaborating to create an integrative final assignment that met curricular outcomes for the courses we each taught. As such, we were interested in documenting our collaboration and in understanding how our pre-service teachers responded to the final integrative assignment and to the ways in which our teaching practice may have changed. Specifically, our research questions included:

1. In what ways did our collaboration and the integrative assignment impact our individual teaching practice?
2. How were the specific discipline curricular expectations for each course met through the creation of an integrative final assignment?

#### ***Data Collection***

Our data collection involved sharing individual notes and conversation with each other. We sat together on a regular basis during the semester and shared the individual classroom experiences we had with students in our courses. In the process, we identified the points at which our courses converged and connected in our teaching. We questioned each other’s pedagogical approaches and thought carefully about how our students responded to our instruction. These conversations shaped our thinking and our understandings of how our collaboration impacted the work our pre-service teachers were doing in our classes.

Additionally, our conversations included an examination of how our pre-service teachers took up the final integration assignment in each of our courses. We focused solely on the final assignment for understanding how pre-service teachers engaged with integration and in understanding how curricular expectations for each course were met.

### ***Analysis***

We utilized Schön's (1983) theory of reflective practice, which includes two types of reflection: reflection-*in*-action and reflection-*on*-action. Our goals were to find a common vocabulary for thinking and talking about our practices, "for questioning the sometimes contradictory beliefs underpinning" our practices, and for "taking greater control" over our own professional growth (Wlodarsky, 2005, p.157). Reflection-in-action (Schön, 1983) was demonstrated by the manner in which we examined and interrogated our own teaching practices for classroom learning experiences that worked and for those that were less successful. This form of knowledge, referred to as "knowing-in-action" by Schön is the kind of practical knowledge that teachers develop in their teaching contexts through reframing, reconsidering, and re-examining their actions and beliefs and values about teaching. We engaged in reflection-in-action individually and then we met to consider how our own practices connected with the other's work. Reflection-on-action was demonstrated at these regular meetings held during the semester, when we discussed our notes on the unanticipated and sometimes puzzling experiences that came up in our classes and tried to understand how our collaboration was impacting our pre-service teachers' learning experiences. The "doing and thinking are complementary...Each feeds the other, and each sets boundaries for the other" (Schön, 1983, p. 280). We tried to adjust our course strategies and pedagogical approaches if we agreed this would support student learning. Reflection-on-action was also demonstrated in the conversations that we had at the conclusion of our courses, when we were able to meet and reflect on how our teaching practice could be developed, changed, or improved through continued collaboration. This paper focuses on what we learned through the process of reflection-on-action. A description of our individual teaching context follows. Then a description of how we came to integrate our teaching is offered.

## **Findings**

### ***Instructor for Literacy Course***

As the instructor for a language and literacy course taught in the second year of a two year after degree B. Ed. program, I examine the concepts, instructional approaches, teaching strategies, assessment and critical issues related to teaching within elementary English Language Arts. The course focuses on what pre-service teachers need to know about literacy in an elementary classroom setting and the nature of thinking in Language Arts that supports student learning in the classroom. Opportunities are also provided for the pre-service teachers to gain an awareness of ways to connect literacy and language concepts to provincial curriculum.

The course goals are met through the design of the course delivery and course content. Course themes are introduced through whole class presentations and discussions that allow the pre-service teachers to make connections to student learning. Pre-service teachers also explore literacy in classroom contexts through class readings/activities and small discussion groups. These groups give pre-service teachers opportunities to reflect on their shared insights and extend their understanding of the subject area. As well, pre-service teachers have the opportunity to consider and examine important aspects of literacy in classroom settings through the course assignments. One assignment requires that they consider a particular language competency; e.g. "Students will listen, speak, read, write, view and

represent to comprehend and respond personally and critically to oral, print and other media texts” (Alberta Learning, 2000, p. 4) and develop a unit plan that focuses on developing that understanding at a specific grade level with particular learner outcomes. The pre-service teachers must also identify the way that the language concept/skill will be introduced in the classroom and the manner in which the practice or skill will be assessed. Pre-service teachers collaborated with peers to complete this assignment.

### ***Instructor for Course on Assessment***

I instruct a course on assessing and evaluating student learning in the same semester as the language and literacy course taught by my colleague. This full course is scheduled twice weekly, six hours per week for six weeks, just prior to the pre-service teachers participating in field practicum. In this course, pre-service teachers are guided to examine the complexity of classroom assessment as a means of supporting and measuring student learning. The course is designed to facilitate growth as an assessor, evaluator, and communicator of student learning.

Specifically, I discuss strategies for gathering relevant student achievement data to inform both teaching and learning (formative assessment), and gathering student learning data to evaluate and report achievement of student learning (summative assessment). The course covers topics such as ensuring fair assessments, planning for assessment, purposes of assessment and evaluation, scaffolding learner outcomes to clearly identify the knowledge, the skills, and the cognitive levels as reflected in the provincial Programs of Study, determining acceptable evidence, and communicating assessment results. There are a variety of assignments to determine the pre-service teachers’ levels of achievement. The culminating assignment is one in which pre-service teachers work in groups of three or four to design a unit assessment plan. They are expected to use the knowledge and skills from the course to create the assignment.

### **Integrating our teaching experiences**

Connecting the two projects was an exploratory, but purposeful project. As we teach the same pre-service teachers in the second year of the B.Ed. program, with courses in the same semester, we recognized commonalities between our course content and required learning outcomes. A year earlier, we had serendipitously connected a final project when our pre-service teachers helped us to see the connections between the final assignments in each of our courses. We responded to their suggestion at the time that we connect our final assignments, but this was done without pre-planning and alignment of course outcomes and expectations. In this iteration, we wanted to plan and more purposefully develop an integration project. Together, we identified an overlap of course content expectations and course assignment requirements, so that a linked understanding could be framed for pre-service teachers in their second year of study. This integrated project would allow our pre-service teachers to plan, create, and develop one assignment and meet expectations for the two courses.

Pre-service teachers collaborated on one meaningful comprehensive assignment encompassing the learnings from both courses, allowing them the opportunity to integrate perspectives from each subject area. The integrative final assignment provided our pre-service teachers the opportunity to

create a grade level unit plan in English Language Arts with a focus on a particular language competency and to develop appropriate and worthwhile assessment strategies to align with the instructional tasks. The assignment included the alignment of assessment strategies as taught in author's assessment course to the related learner outcomes identified in a unit plan as taught in author's language and literacy course. The final assignment was designed to meet the requirements for both courses: knowledge and understanding of language learning and related instruction and student assessment practices.

### **What We Learned**

Once the courses were complete, we shared our observations and notes with each other, identifying common themes and areas that suggested further consideration and investigation on our part. This phase of collaboration utilized reflection-on-action. Our collaboration led to a shared understanding of our pre-service teachers' learning contexts in each of our courses. In linking the final projects from the two courses, pre-service teachers were required to connect distinct subject areas, collaborate within their working group, and bridge essential learnings. The following section describes the themes that emerged from our notes, shared conversations, and reflections about the experience of working collaboratively across subject areas.

#### ***Subject Integration and Connections***

Our goals for creating an integrated learning opportunity were linked to realizing improvements in our practice and a meaningful learning experience for our pre-service teachers. We sought to establish pedagogical links between our two subject areas once we identified the opportunity for connecting our courses through a shared assignment. In an examination of the final course assignments, we observed that integration between our two subjects was achieved to varying degrees in the completion of a course assignment that met outcome requirements for both of our courses. These final assignments linked the expectations for a unit plan in English Language Arts and with appropriate and meaningful assessment strategies. As pre-service teachers developed their unit plans, we observed clear task engagement, meaningful connections to their work, and an ease of effective task alignment. We found that most of our pre-service teachers created and developed polished unit plans with well-defined and appropriate assessment strategies. Indeed, the effort by the pre-service teachers and the results they achieved went beyond what was expected by our individual course requirements.

Their demonstration of learning suggests they realized to some extent integration of course content and ways of thinking. Entwistle, (2010) proposes that authentic problems can encourage student learning and reflection. He notes that students "need to experience powerful learning environments that, besides arousing interest, will also provide authentic, open problems" (ibid., p. 3). By collaboratively completing a course assignment that connected two subject areas with a tangible application to their teaching practice, pre-service teachers were required to find a common vocabulary and context between the two course subjects in order to fulfill the assignment expectations. As well, pre-service teachers needed to establish core concepts that were valued by each subject area. The

subject specific area of English Language Arts from one course provided a realistic foundation for applying appropriate assessment strategies in the other course. This process of clarification and integration fostered a student-centered approach to learning, allowing our pre-service teachers to meet assignment expectations, while also enhancing a more in-depth understanding of our subjects. “Students need occasions and the means to ponder how the insight from diverse perspectives they encounter might appropriately be integrated into a more complete understanding” of complex situations (Newell, 2010, p.9)

In our conversations reflecting back on the manner in which pre-service teachers responded to the assignment, we noted that most of them saw the advantages to meeting numerous expectations in two courses. However, we do not know the extent to which the pre-service teachers experienced a deep understanding of each course. Our collaboration allowed us to intentionally pre-plan, identify common ground with a purposeful linking of course contents and course expectations, and to model a more comprehensive understanding of situational practice (Newell, 2010, Newell, 2006), however we are interested in understanding more fully the extent of new understanding about integration acquired on the part of our pre-service teachers.

### ***Integration and Pedagogy***

As instructors, we created a new opportunity to offer our pre-service teachers a meaningful learning experience that gave them an initial sense of what collaboration across two course subject areas can accomplish. Our pre-service teachers were asked to connect two subject areas and to integrate these course perspectives in their final project. The simultaneous actions of instructional planning and the assessment of student learning is recognized as an essential component of lesson planning in the K-12 education system. When pre-service teachers engaged in the development of their English Language Arts unit plan with appropriate assessment of student learning strategies, they experienced first hand what is required of classroom teachers in the area of planning and assessing student learning. This approximation to classroom practice demonstrated the real-world relevance of their education. Steele and Ashworth (2013) note “that teachers thoughtful use of integration can enable learners to engage meaningfully with multiple disciplinary expectations crowded into school curricula within tight time constraints” (p. 2).

### ***Collegial Collaboration***

As instructors in a Bachelor of Education program, we believe that it is important to teach in a manner that reflects the nature of learning within our discipline and profession (Kluth & Straut, 2003). Current initiatives in education reflect a shift to collaborative classroom pedagogies and connected subject disciplines (McMurty, 2011; Newell, 2010, Newell, 2001). As instructors with different but compatible areas of expertise, we wanted to collaboratively create and explore possible improvements to our practice. Working together to develop a final course assignment for our students created new common ground between us. We learned about the manner in which we each approach subject specific ways of thinking, and challenged each other to consider new ideas in teaching and assessing our students. Our strong working relationship as teacher educators was strengthened as our shared conversations allowed us to reflect on our practice and our effectiveness as collaborators. Our collaboration also facilitated an interest in integrative learning. In our conversations we explored our beliefs about



student learning, and the values related to our courses that we hoped to communicate to our pre-service teachers.

We shared these thoughts at the conclusion of our project. Author 1: I believe that the opportunity to focus on the linkages between my language and literacy course and the assessment course disrupted the way I approached my course teaching. I had to revisit my course content and reexamine related pedagogical strategies and think about making connections outside my subject area. The expertise that my colleague had in assessment and the manner in which assessment is best integrated into curriculum design was valuable to me in my approach to teaching this course. Author 2: The chance to integrate the two projects enhanced my pedagogical practice and I think gave my students a deeper understanding of the importance the reciprocal relationship between planning for instruction and planning for assessment.

### **Implications**

We examined the potential alignment of the two final projects in our respective courses and reflected on the ways in which our practice and our perspectives had shifted. Our conversations echo Schön's view that "teachers' reflection-in-action leads to on-the-spot modifications of their knowing-in-action; modifications that elicit 'back-talk' from the situation" (Holmberg, 2014, p.296) which in turn leads to reflection-on-action. By reflecting on our experiences in developing an integrative learning experience for our pre-service teachers we have identified several implications that suggest the benefits of collaboration and the possibilities of pedagogy of integration.

### ***Impact on Practice***

The advantage of working in a small faculty offered the chance to readily engage in integrative approaches in our work. This milieu offered us the opportunity for close collegial collaboration, and a context for combining our expertise. In their exploration of art/science integration in a B.Ed. program, Steele and Ashworth (2013) describe three elements that support the successful integration of distinct subject areas in post-secondary contexts. These elements include: 1) committed faculty; 2) subject combinations; and a 3) supportive administration (p. 12). The authors note that during the project they tried to treat both disciplines equally, but suggest that a balance does not have to be equal at all times for integration to occur successfully. Steele and Ashworth (2013) also caution that challenges to integration efforts exist. They note that two or more faculty must be committed to the integration effort and both must be willing to give time to planning for the project, to view the "program/course/assignments/syllabus through a flexible lens that will accommodate change, that is to be reflective educators" and to be willing to work through any challenges that arise (p. 12). Similarly Wlodarsky (2005) suggests that faculty demonstrate a "personal commitment, time [commitment], and active listening" (p. 170). As a group of two, we found our integration project manageable and our collaboration generally strengthened our work rather than causing distractions and creating misunderstanding. However, we would welcome suggestions and collaboration from our colleagues. We would like to examine the fragmentation of courses within our program and find common ground without losing the specific ways of thinking inherent in each subject area. We believe that this would

lead to a more cohesive organization of course offerings and perhaps a more rounded experience of curricula for our pre-service teachers.

As well, making integration outcomes explicit in our course outcomes would strengthen the intentional learning goals we hope our pre-service teachers experience. Teacher education programs are obligated to uphold accreditation benchmarks articulated by the provincial government, while also responding to the current themes in education for 21<sup>st</sup> century learner skills. “An emphasis on what students can do with knowledge, rather than what units of knowledge they have, is the essence of 21st-century skills” (Silva, 2009, p. 630). Creating opportunities for pre-service teachers to apply learning between distinct course content is a start to realizing the benefit of curriculum integration.

Finally, we believe that our collaboration facilitated our professional development in a positive manner. Both of us became more aware of particular pedagogical strategies used by the other to meet student learning needs. We became open to incorporating material that we were not as familiar with into our classes and collaborated on how to address student concerns together. Overall, our collaboration and reflection on the collaboration encouraged us to adopt new strategies and to view our work with a fresh perspective.

### ***Potential in Pedagogy of Integration***

A collaborative approach to teaching gave us the opportunity to model for our pre-service teachers effective practice in teaching and assessment. In their future classroom practice as professional educators, pre-service teachers will be required to transfer their understanding to complex and diverse classroom settings. Our goal is to support them in making this leap by modeling ways to integrate learning into our instructional strategies. We believe that the integrative learning experience encouraged pre-service teachers to look for and see the potential for integrating other subject areas in their future teaching practice in order to help their students meet outcomes from a variety of subject areas.

Integrating subject areas also provided our pre-service teachers with the opportunity to develop critical thinking across two subject areas. Flexibility in their thinking, collaboration with peers, and prioritizing tasks were skills required by the pre-service teachers and reflect skills identified as essential for 21<sup>st</sup> century learners (Barkley, Cross & Major, 2005). Increasingly, institutions are intentionally seeking to support students in connecting their learning in more meaningful ways; the goal is “optimal student learning” (Werder, 2013, p. 241). The enterprise of including student-learning outcomes in post secondary education could be an effective strategy for the intentional planning of integrative interdisciplinary projects. Indeed, the increased emphasis on integrated learning in higher education suggests that integrated learning be an articulated outcome of its own (Kennepohl, 2016). There are advantages to incorporating student learning outcomes in the planning process. They have the potential to provide a more student-centered learning environment, increased transparency in learning and a sense of fairness around assessment (ibid., 2016). Identified learning outcomes can provide a way for us not only to achieve individual course outcomes, but to illuminate shared course outcomes which foster integrative and authentic learning experiences for students.

### **Conclusion**

A focus on 21<sup>st</sup> century learning with its emphasis on critical thinking, interpersonal skills, multiple modes of communication, and collaborative productivity, has encouraged a renewed interest in integrative learning in schools (Barkley, Cross & Major, 2005). Integrative learning however requires effort, whether in developing connections between courses, or between academic knowledge and practice. Establishing particular structures and practices within our faculty that support integrative learning can help our pre-service teachers in making connections between their on-campus course work, their practicum experiences, and their emerging sense of themselves as educators. While our collaborative project felt inventive, we realize that it is a very small step in a process directed to how our teacher education program can genuinely integrate meaningful student learning outcomes across courses and subject disciplines.

We have attempted to examine and unravel the impact of the pedagogical approach of combining course assignments, but we do not know how this collaboration influenced pre-service teachers' general experiences within the B. Ed. program. Our next steps involve a new iteration of the project that asks us to collaborate to an even greater extent and allows us to examine the impact of integration on our pre-service teachers developing practice and the perceptions they hold about integrative learning experiences in general. Research into more sophisticated ways of integrating the curriculum across our B. Ed program and the resulting outcomes for our pre-service teachers' learning would also be beneficial (Nokes-Malach, Richey, & Gadgil, 2015; Steele & Ashworth, 2013). Developing a cohesive understanding of the interconnectedness of subject disciplines reflects the manner in which we wish our pre-service teachers to approach their teaching and the multidimensional and complex ways in which students learn.

Instructors tend to work in a culture of isolation. As such, our practice is often solitary. Through the deliberate choice of course topics, group activities, and assessment strategies, we want to create classroom practices we believe are relevant and meaningful for our pre-service teachers and their work in schools. The integration of our course assignments has suggested to us that opportunities for working together exist even in disparate course contexts and must be acted on if we wish to enrich the learning experiences of our pre-service teachers.

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