

## **Social Justice or Status Quo? Blended Learning in a Western Canadian Teacher Education Program**

## **Justice sociale ou statu quo ? L'apprentissage mixte dans un programme de formation d'enseignants dans l'Ouest canadien**

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### **Abstract**

Sustainable pre-service teacher education is needed to encourage academic success for under-represented populations, through both culturally responsive and alternative programming options (Carr-Stewart, Balzer, & Cottrell, 2013). In 2013, the Western Canadian University that served as the basis for this case study, implemented a blended learning pilot course in multicultural education for its existing cohort of pre-service teachers, within their Indigenous Focus Teacher Education Program (IFTEP). The aim of the blended pilot was to increase flexibility in participation for the IFTEP students, who were all employed full time as teacher assistants within a local school board. The author examined the design model through qualitative analysis of student interview data, contrasted against observations of activities on the learning management system (LMS). Five themes emerged as important in effective and culturally responsive practice for blended learning design, in this case related to: institutional challenges, student autonomy and the complexity of commitments. This research presents a critical review of the feasibility of adopting blended learning for Indigenous students.

### **Résumé**

Afin de favoriser la réussite scolaire des populations sous-représentées, il est nécessaire que la formation initiale des enseignants soit durable, et ce, par l'entremise d'options de programmes à la fois culturellement sensibles et alternatives (Carr-Stewart, Balzer et Cottrell, 2013). En 2013, l'université de l'Ouest canadien qui a servi de base pour la présente étude de cas a mis en œuvre un cours pilote en apprentissage mixte portant sur l'éducation multiculturelle pour la cohorte existante d'enseignants en formation initiale au sein de son programme de formation des enseignants axé sur les Premières Nations (IFTEP). Ce pilote mixte avait pour objectif d'augmenter la flexibilité de la participation des étudiants de l'IFTEP, qui étaient tous employés à temps plein comme aides-enseignants au sein d'un conseil scolaire local. L'auteur a examiné le modèle de conception à la lumière d'une analyse quantitative des données tirées d'entrevues d'étudiants, mises en contraste avec des observations d'activités portant sur le

système de gestion de l'apprentissage (SGA). Cinq thèmes sont apparus importants pour une pratique efficace et culturellement sensible de la conception en apprentissage mixte, liés aux défis de l'établissement, à l'autonomie étudiante et à la complexité des engagements. Cette étude présente un examen critique de la faisabilité d'adopter l'apprentissage mixte pour les élèves autochtones.

## **Introduction**

Since the 1970s, Canadian higher educational systems have adopted structural and policy based changes to improve access to post-secondary education for non-traditional students (Malatest and Associates, 2004). Transition or access programs were one of the most common program development alternatives, created to offer more flexible pathways for higher education entry. Transition programs were designed to assist students' adaptation into mainstream programs, while access programs focused on changing the parameters for participation in mainstream programs by offering alternative entry expectations. Both of these program designs have been criticised as being paternalistic in their approach to mitigating perceived student deficits, without really considering alternative forms of practice (Munro, 2012). In other words, they bend the rules of the institution to increase participation, rather than changing how the institution meets the needs of non-traditional learners after they are enrolled. As educators worldwide increasingly adopt online environments to meet educational goals, blended learning has been raised as a potential solution for non-traditional learners (Kral, 2010). The aim of this research was to examine the impact of a blended learning educational design for non-traditional students. In other words, would increasing students' choice in where and when to work improve their access and experience?

## **Background**

The Indigenous Focus Teacher Education Program (IFTEP) presented in this case was designed in partnership with local school boards. Currently employed Teacher Assistants were provided with an opportunity to obtain teacher certification through evening classes at the University with some release time considerations provided by the board. Teaching assistants of self-declared Indigenous heritage were invited to participate in a part-time teacher education program leading towards an integrated Bachelor of Education/Arts degree. Rather than completing the degree in five years of full-time study, students participated in courses established on a schedule that accommodated their full-time positions within the school board. Courses were taken in the evenings, on weekends, and as "intensives" during the summer months, when students were not working in schools. As such, students generally completed their degrees in 6-7 years, rather than the university standard five. Students were placed in cohort groups upon entry, and generally maintained this cohort membership throughout the duration of the program. In the past, the courses were taught entirely as face-to-face offerings, requiring students to travel to the university campus. Not all students worked within the city limits of the university, which meant that after a full working day, students might have been travelling upwards of an hour to get to campus for an evening class. Students were expected to complete between 1-3 courses each term, which meant a considerable time commitment for face-to-face participation, in addition to the time required to complete assignments and other course activities. Administrators of the program were concerned about the demands for students' time

and contacted the researcher to request assistance in examining the potential for a blended learning course design to alleviate some of the scheduling pressures for students.

## **Literature Review**

### **Indigenous Teacher Education**

The gap between Indigenous and non-Indigenous undergraduate completion rate published by Statistics Canada (2011) is reported to be 24.3%. This represents an historic underrepresentation of Indigenous peoples in professional careers such as teaching, and arguably evidences the impact of both past and present colonization practices in Canada. Indigenous scholars have come forward to suggest that it is not only the destruction of culture and systemic racism of residential schools, but the western approach to teaching and learning that perpetuates this discrepancy (St. Denis, 2010). Indigenous scholars and others have suggested that it is not the students who need to change but rather the institutions and the teaching methods (Battiste, 2013; Goulet & Goulet, 2015; Toulouse, 2007). This issue expressed in Indigenous teacher education is two pronged: Pre-service teacher candidates need to be prepared to teach using Indigenous approaches congruent to their future practice, in order to break the cycle of attrition at the K-12 level (Carjuzaa, Jetty, Munson, & Veltkamp, 2010; Tompkins, 2002; Wotherspoon, 2007) and teacher education programs need to be re-designed to foster Indigenous teacher candidates' successful completion (Archibald, 1985; Kirkness, 2013; Orr, Paul & Paul, 2002). Considering that Indigenous teacher candidates often enter teacher education programs as adult learners, with more complex understandings of student-teacher relationships, in addition to the aforementioned considerations, their role as adult learners must also be included in course design (Knowles, 1984).

Specialized Indigenous teacher education programs have been in existence in Canada for more than 40 years, but tend to be small (Sorenson, Young, & Mandzuk, 2005), and focus on modifying schedule and location to increase access, rather than changing approaches. For example, Indigenous focused teacher education programs may be offered part-time in urban centres or through satellite campus locations in remote communities (Gambhir, Broad, Evans, & Gaskell, 2008). Key objectives shared by two of the longest serving programs in Canada are offered by the University of Saskatchewan and the University of British Columbia and include the practices listed above with regard to access, but also a re-frame approaches to teacher education that is more respectful and relevant for Indigenous students, by imbedding Indigenous traditional knowledge in both the content and structure of the programs (Archibald and LaRochelle, 2015). However, with the Indigenous population the fastest growing population in Canada, universities are under pressure to produce more Indigenous teachers to fill the labour market gap quickly, particularly in urban centres (World Future Review, 2012). As public funding is cut for higher education, faculties of education are therefore being asked to do more with less, which makes technological solutions appealing.

### **Blended Learning**

According to a report from the Collaboration for Online Higher Education and Research (COHERE) group (2012), universities both within and beyond Canada have been increasingly encouraging faculty to adopt blended learning course designs in response to a number of issues

arising in higher education. The issues identified included students with increasingly diverse needs, improving teaching and learning practices, and optimizing increasingly scarce resources for higher education. Although some literature examining the use of online, blended and hybrid learning approaches with Indigenous students expresses caution, citing access issues (Boskic, 2013; McAuley & Walton, 2011; O'Donnell, Perley, Simms & Hancock, 2009) as well as careful consideration for relationship building opportunities with the instructor online (McAuley & Walton, 2011; McMullen & Rohrbach, 2003), alternative sources suggested that blended learning over fully online or hybrid courses may have in fact offered advantages over face-to-face programming when both Indigenous pedagogies and community contexts were considered. Vaughan (2012) described a successful blended learning strategy for adult students in a remote First Nations community working towards their high school equivalency. This strategy consisted of study participants being connected to a local mentor, live online tutorials from a distance instructor, and activities based in the LMS, as part of a fully integrated approach. In a comprehensive review of distance education Simon, Burton, Lockhart and O'Donnell (2014) make particular reference to the convenience of web-based asynchronous learning for research participants balancing family and work commitments, but also highlight some participants' preference for synchronous events offered through video conferencing, because of the additional group interaction capabilities and the greater technical competence required to gain access to information within the LMS. There is limited research in the area of blended or online learning for Indigenous students beyond the aforementioned authors, and as such, no specific model for Indigenous blended learning design. However blended learning for adult learners has been studied extensively.

Staker and Horn (2012) developed a blended learning taxonomy, which outlines four models for blended learning around a gradient that starts at one end with a focus on face-to-face events supplemented by online activities, to the other extreme of online events supplemented by face-to-face. The named models, along the gradient, included: rotation, flex, self and the enriched virtual model, respectively. The rotation model was the most diverse of the models, with four separate approaches to rotation between face-to-face and online learning engagement. This model included the concept of flipped classrooms, which involved the developing a fixed schedule of face-to-face and online learning events within a singular course (Staker and Horn, 2012). According to the Flipped Learning Network (FLN), flipped classrooms have often been mistakenly simplistically defined as doing homework at school and schoolwork at home (FLN, 2014). To counter this misconception, FLN (2014) has developed the four pillars of F-L-I-P, which is a framework for designing effective flipped classrooms. The pillars were founded on developing a flexible environment that re-evaluates traditional definitions of attendance and participation, fostering a learning culture that shifts instruction to a learner centered approach, and finally, developing intentional content to maximize the affordances provided by both face-to-face and online learning environments in a pedagogically meaningful way.

Pedagogically meaningful learning design for Indigenous students is as diverse as the students themselves, and is also reflective of generally accepted teaching practices for non-Indigenous students; however, there are some general patterns in teaching strategies that have been shown to engage Indigenous students more fully (Battiste, 2013; Toulouse, 2007; Redwing-Saunders & Hill, 2007). These strategies tend to support the student holistically, and put emphasis on the aspects of intellectual, spiritual, emotional and physical well-being and growth

(Toulouse, 2011). The importance of relationships, and forming positive connections among students and with the instructor, are cited as foundational for Indigenous learners (Raham, 2009). Though there are many ways to approach the aforementioned strategies, some commonly cited approaches include: a) a visual orientation for displaying and processing information, b) sharing stories of learning or experiences, c) hands-on learning in small groups, d) collaborative, rather than competitive tasks, e) opportunities for reflection and assimilation of new information, and f) observation and demonstration of new skills (Bernard, Rosenmeier & Farrell, 2015; Raham, 2009; Tharpe, 2006; Toulouse, 2011).

## **Research Questions**

Challenged with designing a blended learning model for both the institution in question and the teacher education candidates, the research questions became:

1. To what extent is blended learning a feasible option for IFTEP students?
2. What are the important factors within the design of the blended course that support Indigenous pre-service teachers?
3. What are the limitations of blended learning design in this context?

## **Research Design and Methodology**

### **Methods and Analysis**

An exploratory case study was adopted using both quantitative and qualitative data collection methods. Data collected included frequency counts of access to course objects from the Learning Management System (LMS) and semi-structured interviews conducted at the end of the course. Though not an Indigenous methodology, exploratory case study offered the non-Indigenous researcher a bridge to working with Indigenous participants in a respectful way. Semi-structured interviews were strategically not conducted until six weeks after the submission of final grades for the course. As the researcher was the instructor of the course and a contract employee of the university, this encouraged more open dialogue. Over the duration of the course, a collegial and mutually respectful relationship developed. As such, semi-structured interviews became a conversation between equals, with an aim of course improvement for future students. Ethics approvals were sought and granted through two separate ethics review boards, as well as met the specialized requirements for research with Indigenous populations.

### **Participants and Sampling**

The pool of participants was limited to the third year cohort group of the IFTEP, who were participating in a required course on multicultural education, with one student who was an exception. All course participants were invited to participate in the study, and of the ten possible participants, four agreed to participate in the study. All participants were employed as educational assistants within one of two different school boards. Their personal teaching contexts varied extensively from K-9, in class, specialist subject or pull-out assistance duties. Participants were offered a minor incentive (a \$10.00 gift card to a local coffee shop) as a thank-you for participation. It was determined at the outset of the work, that there would be no need for targeted selection within this group.

## **Selection and Design of the Blended Learning Course**

Administrators at the university felt that given the teacher candidates experience within the program, the nature of the multicultural education course, and the instructional design capabilities of the instructor/researcher, the course selected for the pilot would be ideal. The design of the blended learning course was limited by both university policy and budgets. The online component was held within the university mandated LMS due to concerns for privacy and information security as outlined by the federal Freedom of Information and Protection of Privacy Act (FIPPA) and related policies adopted by the university. A preliminary survey of students by the education department indicated that both computer access and Internet access were not problematic. All students normally had access to both of these items at home. Whether face-to-face or at a distance, the course had to respond to a number of fundamental concerns. Candidates identified themselves as First Nations or Métis, and the university strongly believed in the importance of Indigenous culture reflected within their course content and teaching methods.

Administration was also concerned with the maintenance of rigour within the course. Though not pre-occupied with counting hours of traditional contact time with the instructor, the course objectives as outlined in the syllabus had to be met to the same degree as they would have been in the traditional face-to-face course; in other words, the blended course could not be a “light” version of the original face-to-face offering, despite the fact that students would face significantly less physical classroom contact time. The nature of the content of the course itself, entitled Multi-cultural Education, demanded that both the course design and content acknowledged and created a critical place for dialogue on the colonial context in which candidates functioned. Different approaches to safe idea expression that might cause conflict within the group needed to be considered in the online format. In addition, content had to draw from both the broader body of knowledge on multiculturalism, and also Indigenous experience within Canada, and had to be positioned through philosophies based in social justice.

Given the nature of the course, and the respective backgrounds of the researcher and participants, Battiste’s (2013) “trans-systemic” (p. 103) approach to knowledge systems offered a conceptual framework to guide the course design. Trans-system analysis was based in bringing two different knowledge systems together by considering the assumptions underlying each, to reach beyond the two distinct systems to a new experience that was fair and just for all students. This concept has also been referred to as “two-eyed seeing” by Elders Albert and Murdena Marshall, where the seer benefits from a broadened view by being able to see the world from two different eyes or world views (Bartlett, Marshall & Marshall, 2012). The trans-systematic course design shifted the conversation from a discussion of how one knowledge system dominated another, to how multiple approaches to understanding the world could be considered together.

### **The Pilot Blended Design**

The pilot design reduced face-to-face time by 50% in the flipped model. Informed by the literature review on blended learning design and Indigenous education, the online asynchronous activities were designed to expose students to the core content of the course, while face-to-face sessions were planned to take place at critical points in students learning. The events of the face-to-face sessions included presentations as culminating events, talking circles where students could share thoughts on controversial items, modelling the use of the LMS and technology tools,

and learning challenges that allowed students to work through more difficult aspects of the course content together. The online asynchronous activities were designed to encourage collaboration among the students through the use of discussion forums and blogging tools provided by the LMS. The online component was structured through regular discussion posts around learning objects such as case studies, videos or readings from the course text, along with application activities where students were asked to design lesson activities or plans that demonstrated the concepts addressed in a given week, and finally a larger reflective activity, which asked students to create regular blog posts where they shared more in-depth thoughts on issues raised in the course.

## **Findings**

### **Participant Profiles**

The participating teacher candidates consisted of two male and two female students. All self-identified as being “good” with technology and using technology regularly in their daily lives. All participants were adult learners, between the ages of 30-45, with a variety of different careers behind them that may or may not have been related to education, prior to becoming teacher assistants. Though the total number of students participating was small, it represented a 40% response rate, given the total cohort size was ten.

Nalini was in her final year of the International Teacher Certification program and entered IFTEP with special permission that allowed her to fulfill her graduation requirements in a more timely fashion. She was new to the cohort, and faced the additional challenge of sharing her position on sometimes controversial topics with students who she had met for the first time in the context of this course. Nalini was the only member of the cohort who was not self-identified as Indigenous. She was a new immigrant to Canada, having arrived only two years previous. Nalini was married, worked full time as a teacher’s aide, and had two small children at home.

Mike was a member of the IFTEP cohort and was in his third year of the program. Prior to entry in the cohort, he had been working in his school board for many years, and saw the teaching certificate as an opportunity to increase his salary and improve both his working and family conditions. As Mike was the primary financial provider for his family, the expense of returning to school meant that some difficult financial decisions had to be made. For example, Mike gave up his vehicle because he stated that he could not afford the insurance and operating fees involved in running the car while at school. Mike indicated that having older children made making time for school somewhat easier for him, because his children were relatively independent.

Jennifer was also a classroom TA in her school board. She was a mother of two small children that she raised with her partner. Her partner was very supportive of her return to school and was also taking courses in a different program at the same university. His support offered Jennifer an avenue to discuss issues as they arose within the IFTEP, as she indicated that she was not entirely comfortable with the community of the cohort and felt a little bit like an outsider, which she stated impacted her participation.

Daniel's TA duties involved working in a pull-out program with specific students. He indicated that he had wanted to become a teacher his entire life, but was not accepted into education on his first application. Instead, he became a teaching assistant and was excited for the opportunity to become a teacher through the IFTEP program. He had older children, and indicated that finding balance now that he was back at school appeared easier for him than some of his classmates with younger children or more complicated backgrounds and living arrangements. The only real sacrifice he felt he had to make upon entry into IFTEP was giving up some of his hobbies, which he indicated was also a temporary state.

### **Institutional Structures Made Participation Online Challenging**

Although many unofficial systems were in place to navigate some of the administrative challenges for Indigenous students within the university - from registration, to reporting assessment - these systems could not be applied easily within a blended course. Two of the four participating students entering the course in September faced a "hold" on their accounts because of unpaid summer term fees. The nature of the students' 10-month employment contracts and the expense of summer term fees meant that most students needed until the end of September to get caught up on bills. The hold meant that students could not officially register for courses until their outstanding fees had been paid. This was a known issue for students in the cohort and was easily circumvented in face-to-face classes where there was an understanding between faculty and administrators in the IFTEP that fees would be paid late and complete class lists created midterm. Students were encouraged to participate in classes regardless, and were added officially to the Registrar's official course list several weeks after courses had begun. In some cases, students were registered and grades entered after a full course was completed. However, the IT systems did not allow for entry into the LMS platform for students with a hold placed on their accounts. Therefore, access to the online portion of the course was made impossible for any student with a hold. Despite several different approaches to negotiating these policies, they could not be amended, circumvented nor could exceptions be made. For the instructor and the students impacted, this meant that course material was emailed directly to students and returned to the instructor to post in the LMS. The impacted students were left feeling isolated from their classmates until the hold was removed, and they entered the course officially 2 to 3 weeks late. Removing the hold from a student account was also a slow process, which involved waiting for the processing of payments, and the dissemination of this information to the various departments involved.

### **Students Needed to Be Eased into a Flipped Class Model**

As outlined in the course design section, a flipped model with a 50% reduction of class time was applied to the course design. The course content from the LMS was not repeated in face-to-face events. The face-to-face events were used as introductions or closures on units of work within the course, as culminating events for sharing project work, or to debrief and discuss particularly challenging concepts. Two students (Mike and Jennifer) indicated they would have preferred to see a closer connection between the online and face-to-face portions of the course through a more explicit process of practice and modeling of activities to be completed online. These students had difficulty recognising the connection between the content they were exploring online and the material examined face-to-face, as illustrated by the following comment from Jennifer: "The online part of the course felt like a course in itself, like it was two courses."

A third student (Daniel) identified the need for better scaffolding between the two types of learning events because the face-to-face portion of the course often served as a pressing deadline for the completion of the online activities, as illustrated by the following statement: “For myself, I would have liked to be able to do some of the responding to blogs in class, that would have helped me stay on track time wise.” In continued discussions with Jennifer, she both contradicted and supported this comment by stating that the asynchronous portion of the course meant “the pressure was always on, there wasn’t a time where it felt for me, oh, OK let’s take a little breath here.” So while Jennifer felt she was always under pressure because the online material was always waiting, Daniel took a different approach, almost ignoring the material until the face-to-face deadline. Daniel, Jennifer and Mike all stated that the course forced them to re-examine their study skills and to become more independent learners, though for the first offering of a blended course, they would have appreciated more face-to-face time to assist in developing a new routine.

Because the majority of the course content was presented through the LMS, upon entering the course, students were faced with a large amount of both text and multimedia based content. Attempts were made to chunk the information into manageable portions; however, presenting material in multiple pieces also increased Jennifer’s stress around the amount of work that needed to be completed. Jennifer stated: “Things look different written down. Some days I looked at the workload and felt overwhelmed, but then when I started doing it, it wasn’t so much.” She was also nervous about the quality of her work in the small online activities designed to encourage engagement with the content, as illustrated by the following statement: “The quantity of work [seemed overwhelming]... then I started getting grades back and I thought OK it is not as bad as I thought it was.” Both verbal reassurance during the face-to-face portions, as well as frequent contact through discussion forum and email were important in establishing the climate for participation. By the end of the first week of the course, the first discussion assignment had 77 views, but only four replies, which came from two students. Participation increased dramatically over the duration of the course as students became more familiar and confident with the technology and each other.

### **The Freedom to Choose When to Work was Not Necessarily a Benefit**

Students initially had great difficulty with time management, as illustrated by Mike’s comment: “I have evolved from this class., Part of that was to make sure to put aside time. I blew that this time, putting things off to the last minute so I didn’t have time to respond.” Scheduled class time served an unexpected purpose; it allowed students dedicated study time that family members could understand. All four of the students identified facing some form of personal conflict when trying to balance their study needs against family demands, when they tried to study at home, as illustrated by Jennifer’s comment: “I realise for every hour in class we are supposed to be doing three at home, but we also have family around, and the distractions pulling you away from time you would be spending, in a way it was sometimes a hindrance.” Nalini laughingly identified that it wasn’t just the time, but the mental distraction her family observed in her when she was working that caused some familial stress: “You have to sit and write and you know you can do that once in a while, but it was really supressing for my family. They are like, you are a disaster when you do this blog, when are you finishing?” Recognizing the complexity of working at home, and looking for a solution in the term after this course was completed, Daniel and Mike began to gather with other students from the ITEP cohort at the previously

scheduled class time on the university campus, in order to work on the course material online together. Mike describes this solution as follows:

We don't have a course, but it's an [online] class. There are 6 or 7 of us coming in anyway to bring our computers, and to do it because of your class. We know putting it off, we put off all the [online] stuff last time, so if we don't come in and do it all together then we will all be putting it off again until it is due, where now if we all come in and do this... we developed a community. I find that has helped a lot, having that extra support.

Daniel seemed the least impacted in the home, stating that though negotiating time with his family was an issue, he found the added benefit of time for processing content to be a great advantage:

When you do it at home, you are at home so you are always accessible with the kids, so you don't get the time. When you are on the computer, they are there, so in that way it was hard but for me it was better cause I didn't have to be there right first thing at the morning, I could do it later at night. So I see both sides of the coin for me, getting me out of the fact that if you wanted to do it later or go over stuff again, you always have that extra stuff on the computer you can watch it or re-read it, or you have the time, you can put in more time if you want. But in class, if you have that hour and a half or two hours, when it's done it's done, so if you haven't taken the notes that you really wanted to take, you have to get it from someone else, but with the computer you are allowed to go over things again, and get a better grasp on items.

### **Student Voice**

Although all students identified the blogging component of the course as the most challenging, all four reported a greater appreciation for the course content and their classmates through the instructor's position as a facilitator. Three students (Daniel, Mike and Nalini) identified that they appreciated the autonomy and validation of their opinions that occurred both through blogging and the face-to-face portion of the course. Nalini, in describing a talking circle event, stated: "I like the way you gave the discussion a platform and then let the students take over." Daniel identified the blog as well as the other discussion-based posts as important to the course:

It gave me a different sense of other situations and just a more empathetic view and comprehension of where other people were coming from, their understanding, and opinions. I think with the discussion forum like that, you are allowed to put stuff down and read other stuff and grab something else from it. In class discussion you can't always do that, because some people don't talk, that is not the way they are.

Jennifer, who found the group dynamics in the face-to-face setting complicated, stated the online communication was even more complicated, as exemplified by the following comments: "I found that because of class dynamics, that um, you get situations where some people would not respond to certain people, or you know, you get that situation where a couple of people support everyone else, but leave a few out." Jennifer found she was counting posts of others, worried about who posted to who, because she did not want anyone to feel left out.

## Immediate Relevance

In reviewing the online content, the activities that were clearly linked to practice were those that were most frequently accessed (see Figure 1). For example, the lesson plan draft activities, case studies, and resource evaluations were the most heavily trafficked items in the course.

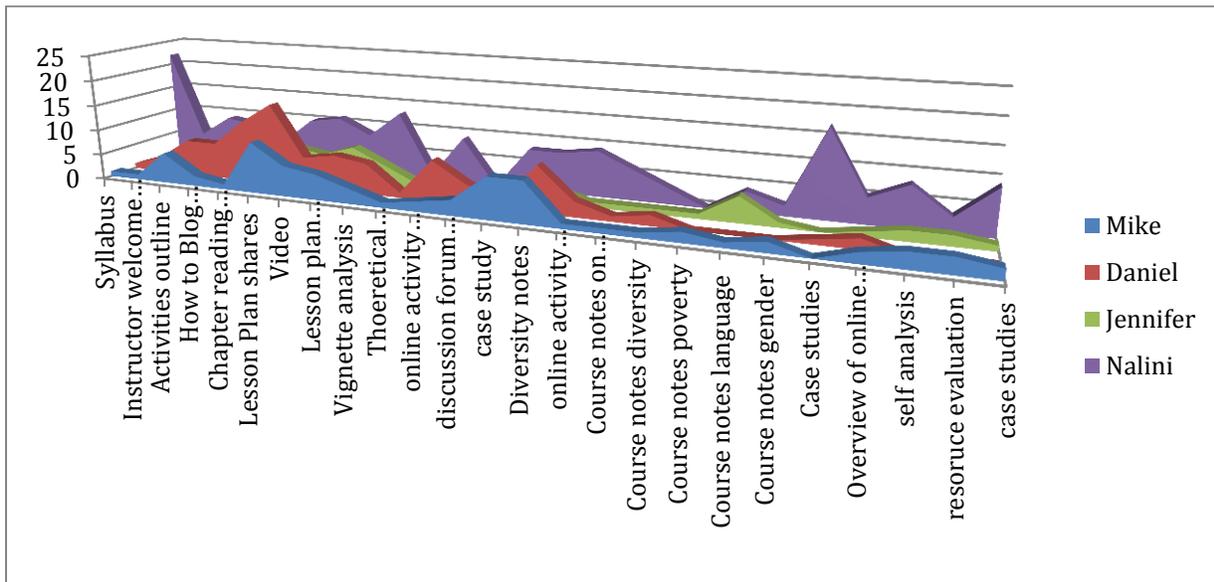


Figure 1. Frequency of access to course activities over time.

All four of the students re-iterated these comments in the interviews. Daniel claimed that “taking this course gave me practical value... The specific techniques were really helpful, so I can build lessons around the needs of my students, and keep in mind the biases that as a teacher I should be thinking about.”

## Discussion

The findings of this study indicate that changes on a course level may not increase participation levels when they are not accounted for systematically within the institution. On an institutional level, the policies related to access to courses based on the payment of fees by pre-set deadlines that could not be circumvented, caused difficulties for both the instructor and the students. No literature could be found discussing the impact of university business models on participation; however, anecdotal evidence abounds, with this case being an example of one of the many work around processes put in place in specifically designated Indigenous study centres.

At the course level, a design favouring freedom of time through asynchronous activities offered flexibility, but did not lead to improved access or convenience for students. Echoing the work of Simon et al. (2013), group process was preferred over independent work. The preference for collaborative experiences was also illustrated by the most preferred asynchronous activity, a bi-weekly reflective blog where students enjoyed sharing their individual perspectives on course material. When examined against the literature on Indigenous student success, the need for and

impact of relationship building and reflection is often cited (Bernard et al., 2015; Raham, 2009; Toulouse, 2011), which likely contributed to the engagement and uptake of this task. As in work cited by McAuley & Walton (2011), the non-hierarchical structure of the blogs, with each student given equal opportunity to participate in their own way, through their own story, was frequently cited as an important aspect of the course. Other asynchronous activities that were favoured by students were those that most directly linked to future practice, such as lesson plans. The reason for this can likely be attributed to the students being adult learners, who are characterized as needing direct content relevance in order to engage with course materials (Knowles, 1984).

In discussing the flipped design, the most significant finding may be that the freedom of selecting personal time to work is not actually a freedom, because of the complexity of family and work demands. Fixed classroom time and space provided by either face-to-face sessions or synchronous virtual events, may be a requirement that is beneficial for students both in securing time, and also in providing support (Simon et al., 2013). The model devised by the participants of holding a “teacherless” class in a coffee shop or classroom on campus, in order to work together on the asynchronous portion of the course, provided the collaborative support needed to keep students on track, and also engaged in the material. Establishing a learning centre that supports technology and students through mentoring and facilitators has long been cited as critical to the success of blended and fully online opportunities designed for Indigenous students in remote communities (Gabhir et al., 2008; Sacher, Sacher & Vaughan, 2014; Vaughan, 2012); however, the results in this case indicate the importance of the same features in urban settings.

### **Conclusions**

Despite the institutional hypothesis that a more flexible schedule would improve access for teacher candidates, the results of this study show that flexible time is not necessarily a benefit to Indigenous students, and that increased reliance on established intuitional systems removes some of the flexibility previously established around fee payment and registration. Students in this case showed a preference for connection, and appreciated tools that supported connection to the extent that they allowed students to get to know one another better, or to hear views that might not otherwise be voiced in a face-to-face setting. However, they found it challenging to work independent from the classroom setting, which provided comradery, a time bound space that could be understood by family members, and an artificial deadline that could be used to self-pace studies.

### **Implications**

From an institutional perspective, one of the key implications related to the processes for entry into the LMS. Accommodations made for students in face-to-face classes related to late fee payment arrangements could not be implemented. A second implication for institutions related to space. Blended courses are often suggested as a programming solution when physical space is in short supply for classes; however, this may not be effective for students, who in this case chose to come to the university to work together on the online portions of the course.

For instructors and designers, one of the implications is to examine content holistically, rather than chunking material for easy consumption onscreen, and to present it in a format that is

less piecemeal. It is also important to invest time both initially and throughout the course, in directly connecting online material to face-to-face events, by reviewing online content with students, which would allow them to develop more confidence in this area. For students, it was clear the freedom of blended learning came with a cost, as they had to renegotiate their methods of working, and develop a different approach to off-campus study.

### Limitations and Future Study

Due to the small sample size, the results of this study may not be transferable to other contexts and may be biased by the characteristics of the teacher candidates who chose to participate, exhibiting similar characteristics not representative of the larger group. To further this, as a non-Indigenous person, the researcher needed to be sensitive to the context and the cultural variables within the analysis, and the interpretation of the findings from a Eurocentric world view that may not have been reflective of participants' values. This study was an initial attempt to address issues of instructional design and blended learning strategies for Indigenous students, and highlights the need for more work to be done in this area.

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