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## Self-Regulation and “Time Off”: Evaluations and Reflections on the Development of a Blended Course


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# Self-Regulation and “Time Off”: Evaluations and Reflections on the Development of a Blended Course

## **Abstract**

Changes in both the landscape of education and digital technology are giving rise to interesting, innovative, and potentially effective pedagogical possibilities. As educators of the 21<sup>st</sup> century, we are witnessing continuous changes in the way we teach as well as the way students learn. This study is a part of an ongoing research program aimed at evaluating the pedagogical effectiveness of blended teaching. More specifically, this paper aims to describe some of our reflections as we developed, delivered, and carried out an evaluation of a university course taught using a blended format. Undergraduate students (n=109) in a fourth-year capstone course participated in this study. We report on the students’ perceptions of the effectiveness of the delivery method of the course, while focusing on the struggles they encountered, including difficulties keeping up with the course content, particularly on the weeks where the lecture was online, as well as a struggle to stay organized and connected with their peers and their assignments. Self-regulation turned out to be a major determinant of success in this type of course. We conclude with suggestions to improve students’ social and academic experiences as they navigate learning in a digital world.

Les changements survenus à la fois dans le paysage de l’éducation et dans la technologie numérique donnent naissance à des possibilités pédagogiques intéressantes, innovatrices et potentiellement efficaces. En tant qu’éducateurs du XXI<sup>e</sup> siècle, nous assistons à des changements continus dans la manière dont nous enseignons ainsi que dans la manière dont les étudiants apprennent. Cette étude s’inscrit dans le cadre d’un programme de recherche en cours qui a pour objectif d’évaluer l’efficacité pédagogique de l’enseignement hybride. Plus spécifiquement, cet article vise à décrire certaines de nos réflexions au fur et à mesure que nous élaborons, livrons et exécutons l’évaluation d’un cours universitaire enseigné selon un format hybride. Des étudiants de premier cycle (n=109) inscrits dans un tout dernier cours de quatrième année ont participé à cette étude. Nous présentons un rapport sur la manière dont les étudiants ont perçu l’efficacité de la méthode employée pour enseigner ce cours, tout en mettant l’accent sur les problèmes qu’ils ont rencontrés, y compris les difficultés à faire face au contenu du cours, en particulier durant les semaines où les cours magistraux étaient présentés en ligne, ainsi que sur leurs difficultés à rester organisés et connectés avec leurs camarades de classe et avec leurs devoirs. Il s’avère que l’autorégulation est un élément important pour la réussite de ce type de cours. Pour conclure, nous présentons des suggestions pour améliorer l’expérience sociale et académique des étudiants dans leur parcours de l’apprentissage au sein d’un monde numérique.

## **Keywords**

blended learning, self-regulation, evaluation, reflection, higher education

Teaching entails the creation of welcoming learning environments in which students can engage course material effectively and thereby incorporate the newly acquired information into their existing knowledge structure so that it becomes meaningful and functional. While the larger mission of teaching remains fundamentally unchanged, in recent times its delivery has been undergoing a continuous shift. The purpose of this paper is to reflect and report on the use of a blended delivery system in teaching a university course.

A combination of factors, including the increasing pressures from society, institutions, and individual students, along with improved technological options available for pedagogical innovation, has created the conditions to develop a range of new learning delivery systems that go beyond the traditional face-to-face (F2F) teaching environment that has characterized education for the last few hundred years. While F2F continues to be the predominant mode of delivery, increasingly, digital components are being introduced into education either informally, where some components, such as particular lecture units or elements are made available electronically, or more formally, where attempts are made to systematically integrate both F2F and online elements in a coherent fashion.

Hence, delivery systems can be thought of as existing on a continuum, ranging from an entirely traditional F2F classroom, to online environments consisting exclusively of digital components. There is growing empirical support for models consisting of a blend of these two modalities where F2F delivery is integrated with digital components (see Bernard, Borokhovski, Schmid, Tamim, & Abrami, 2014; Bonk & Graham, 2006; Garrison & Vaughan, 2008). A blended, or hybrid, approach usually combines the best practices of the traditional F2F lecture with the newest and most effective digital educational tools available (Bele & Rugelj, 2007), resulting in the delivery of pedagogically effective courses that are responsive to the challenges faced by the twenty-first century teacher and learner. When discussing online learning, Tony Bates (as cited in Simsek, 2011), an expert on distance education, states that the main reason this type of learning often fails is poor pedagogy; that is, simply trying to transfer a model of classroom learning to an online environment will not ensure success. Additionally, the main reasons this type of learning has become so popular is due to the increasing need to have more flexible programming as students both work and study, as well as the growing ease of access to technology for students (Simsek, 2011).

While the term *blended teaching and learning* has become something of a buzzword in many settings (e.g., education, government, corporate), there is still a fair amount of ambiguity about what is meant by this term. For instance, how is blended learning different than other forms, such as distributed learning, or open and flexible learning? In fact, according to Masie (2014), some define the term so broadly that one would be hard pressed to find any learning system that was not somehow blended. For the present study, we adopt a rather general, but workable, definition (which is similar to the one adopted by the Ontario Ministry of Training, Colleges and Universities) wherein blended teaching is defined as any educational model where online delivery ranges from 50% to 80%.

A blended model does increase flexibility in both pedagogy and delivery (Kocoglu, Ozek, & Kesli, 2011). In addition, it does seem to accommodate students' various learning styles. For instance, in a recent study, Wichadee (2013) reported that students' satisfaction was higher with a blended course, as it promoted thinking about material, while observing and listening to others, and allowed students to work at their own pace. Moreover, a key characteristic of any form of online learning is the independence students can feel as it takes away restraints of time and place,

and instead gives the student's control of what, when and how they want to study (Cunningham & Billingsley, 2003).

It is worth noting that there is an increasing number of well-designed empirical studies that evaluate the effectiveness of these blended models (see Bernard et al., 2014; Bonk & Graham, 2006; Garrison & Vaughan, 2008). For instance, Bernard et al. (2014) published a meta-analysis reviewing 96 studies involving over 10,000 students, where they concluded that having some technology in the classroom is more effective than a traditional F2F classroom with no technology. The results of this meta-study are consistent with those of larger-scale studies (Schmid et al., 2014) that have used a range of evaluation measures.

While there is much excitement over the promise of the considerable potential of blended courses, it is important that we remain critical and reflective, and that we make systematic efforts to evaluate the effectiveness of a blended delivery. For example, some students report difficulties with blended courses; particularly, they encounter issues of keeping up (i.e., self-regulation). Students who had stronger levels of control in their lives were found to perform better in online courses (Barnard, Lan, To, Paton, & Lai, 2009). As stated by Zimmerman (2008), research on learning performance has shown the importance of self-regulation in any context of learning (F2F, online, or blended). In their study, Barnard et al. (2009) found that online self-regulation was associated with high levels of time management, goal setting, and self-evaluation. It therefore becomes important to further investigate self-regulation as a factor in learning that has online components, in order to gather a stronger understanding of how an individual's self-regulation could be impacting their learning experience in a blended course.

Given the far-reaching implications of adopting any new pedagogical system, it is prudent to resist the allure of the considerable hype and to maintain reflective and systematic approaches in both the development and evaluation of new blended initiatives. It is worth noting that realizing these benefits of technology requires careful planning and an understanding of the various aspects of blended course design. The purpose of this paper is to provide an account of the experiences of university students within a course delivered using a blended approach. We wanted to investigate possible psychoeducational factors that may influence the success and experiences of blended learning. In the rest of the paper, we outline the components of the blended course and provide an account of the evaluation and feedback of students' blended experiences. In addition, we present the advice they would give to future students enrolled in a course using the same delivery methods. Lastly, we aim to provide pedagogical recommendations, particularly focusing on self-regulation factors.

### **Components of the Blended Course**

The purpose of making a significant part of the course available online is to facilitate students' engagement of the material at their own pace while also ensuring that this pedagogical delivery system would set the conditions to maximize F2F class time. Thus, the dovetailing of these two components has the potential to improve the learning experience of students taking a fourth-year Child and Youth capstone course.

In developing the syllabus, the aim was to design a course so that students are engaged in a variety of interrelated academic activities, ranging from analyzing video-based material to reading research papers, to carrying out in-class F2F activities. The structure of the course followed a recurring academic cycle consisting of three lectures. The first two in each cycle are

presented online through a web-based course delivery system (i.e., Sakai, a course management program), where students engaged a number of components, including:

- a 50-minute video specifically developed for this course;
- targeted readings related to pertinent capstone course material (i.e., attachment, temperament);
- PowerPoint slides containing the outline of the lecture material, along with selected short videos illustrating the phenomenon being studied (e.g., video of secure and disorganized attachment);
- posted responses to instructor-prompted questions to the videos and the readings; these reflective postings are aimed at building bridges between the F2F and the online components;
- online practice testing (i.e., using Sakai); and
- a contribution to the development of a course glossary, aimed at providing definitions and examples of summative concepts encountered through the four years of study.

The last lecture in the cycle is held in a traditional face-to-face (F2F) classroom environment, where students are engaged in a number of activities designed to review and expand the material covered in the unit. Students have ample opportunity to ask clarifying questions, as well as to engage in team-based activities, such as solving crossword puzzles that summarize major concepts discussed and presented in the unit.

Course requirements are designed to emphasize the dovetailing of the F2F and digital components. For example, the major course component involves the completion of a team-based Wiki project, which serves as the catalyst for most of the course-related activities that are completed through student-to-student interactions that are both online and F2F. In addition to the activities listed above, the Wiki project combines online and face-to-face modalities, requiring students to create a digital document showing what they have learned about their own specific topic, and to make a presentation of their project in front of the entire class. A component of the Wiki project required students to develop a case study related to the area of research they were focusing on (e.g., fostering attachment), as well as to produce a short video, illustrating the salient features of their case study. At the end of the course, each team has to make a presentation of their Wiki project in front of the entire class.

### **Purpose of the Current Study**

The present study sought to examine the positive and negative aspects reported by fourth-year students enrolled in the blended course just described, including issues related to self-regulation. Through evaluating the experiences of the students and allowing them to express what advice they would give to future students in a similarly delivered course, we sought to further examine possible psychoeducational factors that may be influencing the experiences of the students, as well as gaining a better understanding of what instructors can do to help students succeed in this type of course

## **Method**

### **Participants**

The present study involved 109 undergraduate students in a fourth-year capstone course, ranging in age from 20 to 29 years with the majority (90%) being in the range of 20-22 years old. Additionally, 98% of the students had been in university for four or more years.

### **Measures**

We used a series of questions asking students about their experiences in the blended course (Marini, 2012); for instance, “compared to typical face-to-face courses I have taken, I feel isolated in this course” or “When I study for this class, I set goals for myself in order to direct my activities in each study period.” Students were asked to respond to a variety of items that measured various learning components, such as their motivation, organization (i.e., self-management), or comfort with technology. In addition to these Likert scale items, students were also asked to respond to open-ended questions designed to elicit feedback on the delivery of the course. For example, students were presented with three open-ended questions to respond to, namely: (a) what they liked most about the blended course, (b) what their biggest challenges were, and (c) what advice they would give to a student new to this type of course.

### **Procedure**

The capstone course was offered from September to April. Ethical clearance for the present study was received by the University Research Ethics Board prior to commencing survey distribution. Near the end of the course, a research assistant distributed questionnaire packages to any students willing to share their blended learning experiences. They were informed that participation in the study was completely voluntary and not connected in any way to their outcome in the course, as per ethical standards. Students were given time at the beginning of a face-to-face lecture to complete this questionnaire, which took about twenty minutes and those who chose not to participate in the study were able to spend that time working on their assignments. A research assistant collected the anonymous, completed packages.

### **Data Analysis**

Responses of Likert scales were entered into the statistical program SPSS, while written responses were organized by theme within each question. Correlations and frequencies were analyzed using IBM SPSS version 24. The data was interpreted taking an educational psychology perspective in order to gather a better understanding of pedagogical issues and of self-regulation that may be affecting the university students. Open-ended responses were organized by reoccurring themes where responses were grouped and coded based on overall recurring themes using a grounded theory approach, where the researcher comes up with a general explanation of a process or action, shaped by the views of the participants (Creswell, 2007). The researcher then counted the number of times each theme was mentioned to determine the prominence of each theme. This is an important step as it gives a visual depiction of how

often each theme was mentioned, while also protecting against potential bias (Miles, Huberman, & Saldana, 2014).

## Results and Discussion

When asked about what they liked most about blended style course, students responded with two predominant ideas of being allowed to learn at their own pace, and not having to physically come to class every week. Dealing with the constraints of time and geography was quite evident from the students' responses. For example, one student responded that what she liked most about the course was that she "did not have to come to class yet still able to learn" and it allowed for her "to explore info on [her] own and make [her] own interpretation instead of only being told profs interpretation." While another student mentioned that the course was "a good balance between in-classroom learning and independent self-taught learning;" yet another student mentioned that it gave her "the freedom to study at my own pace without a strict deadline." This emphasizes one of the main benefits of blended learning cited by the students, which is being able to learn at any time without being limited to a specific time and place (i.e., see Kocoglu, Ozek, & Kesli, 2011). Given the increasing demands on university students, it makes sense that students would see this feature as being quite beneficial to their academic studies. Another advantageous feature of blended learning is somewhat related to time constraints and that is the constraint of geography, where students can study anywhere that is convenient, ranging from a university library to a diner. These aspects of blended learning may be particularly beneficial to mature students or those with professional careers who are trying to balance their learning schedules with the demands of family life and is consistent with the findings of Cunningham & Billingsley (2003) who discussed the independence student's feel through components of online learning.

However, when asked about what had been the biggest challenge for them in the course, students listed difficulties they felt they had as a result of the freedom due to the course set-up. For instance, students suggested that it was difficult to organize their time effectively, while also stating that they felt overwhelmed by the lack of structure offered during the two weeks of digital instruction, given that they were only physically in class one third of the time. This finding is particularly informative for the successful development of courses that use online learning as highlights the need for a stronger level of time management skills and self-regulation (Barnard et al., 2009). Many students also reported that they felt it was more difficult to navigate through course material that required a fair amount of self-initiative. For example, one student noted that the biggest challenge was "staying focused and understanding the e-lecture material" while another student stated that "remembering to keep up with weekly posts and tracking them was sometimes a challenge." This illustrates the opposite side of freedom from structured F2F; that is, difficulty that often arises with online learning components as it requires students to learn on their own and be able to manage their time effectively when not being given direct structure from the instructor (Cunningham & Billingsley, 2003). Paradoxically, while freedom from a fixed schedule is welcomed, it seems as though students would benefit from having stricter guidelines of when to do readings and have a deadline for when they need to be ready to discuss them. Blended learning requires students to take a higher level of control of their learning, setting aside time each week to complete their readings or online postings without necessarily having the direct follow up interaction with the professor or other students. It is difficult to navigate the delicate balance between allowing enough freedom to permit students to study at their own pace,

and at the same time provide enough structure and supervision to make sure students do not fall too far behind in engaging the course material.

Lastly, students were asked “What advice would you give to a student new to blended courses?” This question is where students shared what they would do differently based on their personal experiences with the course. As can be seen in Table 1, the most dominant theme generated by this question is the idea of keeping up with the course content and being able to effectively manage one’s time. Although many students mentioned not having to go to class every week as one of the things they liked most about the blended style course, another emerging theme made it clear that this was also a difficulty for students, as it requires them to create their own schedule, and make sure that they were still doing work even when not directly in class. As one student noted, “make sure you take the online component seriously, the time off is not ‘time off’ so-to-speak; you still have to actively engage in the course material.” This response emphasizes the notion that students might get caught up in the idea that they do not have “class” in a particular week; however, they still have course content to cover and work to complete. This requires the student to self-manage this part of the process by making sure that this component gets done on their own time.

Table 1  
*Themes of Advice for Future Students in a Hybrid Course*

| Theme                   | Frequency |
|-------------------------|-----------|
| Time Management/Keep Up | 73        |
| Organization            | 27        |
| Motivation              | 15        |
| Networking              | 11        |

Karal, Cebi, & Peksen (2010) interviewed students about their online learning experiences and report that some students found it difficult to motivate themselves for tasks such as the online tests and exams due to the differences in working environments. Additionally, self-regulation has been found to play a role in the effectiveness of online learning in particular (Barnard, et al., 2009; Lin, Huang, & Chuang, 2015; Wang, 2011). Another challenge for the instructor of this type of distance learning is needing to find the appropriate balance of giving students the freedom of choice while not giving too many choices. As McManus (2000) found, students with high levels of self-regulation learn more poorly when they have limited choice, while students with low self-regulation struggle more when given too many choices.

A blended course requires the students to schedule their own time effectively and be organized, as is reflected in many related advices from a number of students. For instance, one student mentioned, “Be motivated! Schedule time each week to be online and engaged with online lecture material.” Another student left the following advice for future students, “BE OPEN! It is different than what you are used to but if you go with the waves, it will be fun, interactive and further your understanding on particular subjects.” Yet another student’s recommendation was to suggest writing down everything and use a calendar as it is particularly difficult to stay on track when you are not in class every week. As one student stated, “Stay organized and keep a detailed agenda of what to expect each week.” Another student wrote, “since you don’t go to class every week you must make sure you are consistently checking the syllabus and any posted announcements from the prof.”



Students also shared sentiments of needing to stay motivated, especially on the weeks that they did not have class, while some students even mentioned the importance of networking, specifically in this type of class: “Engage with other students in the course, especially when you don’t have a lot of face-to-face lectures.” While another student stated that it is important to “make friends and remind each other when things are due.” These comments emphasize the importance of making connections with others in the class, not only to help engage in course material but also to help with staying on top of deadlines and weekly assignments.

The findings presented in Table 2 add quantitative results to the more qualitative data presented above by illustrating some interesting correlations that help to further understand what may contribute to a student having either a positive or negative experience within the blended course. Supporting the open-ended responses of the students, there was a significant moderate correlation (.302\*\*) between having strong planning/time management skills and ranking the positive aspects of the blended course higher. The results emphasize the association between needing to ensure that students are using time effectively and staying on top of their work and having a positive experience in this type of course. Another noteworthy point is the idea of one’s comfort with technology having an effect on their overall experiences. There was a moderate negative correlation (-.236\*) between having a lower level of comfort with technology and ranking the negative aspects of the course more highly, showing that not having strong technological skills could be another hindrance of having a positive and effective experience with this type of course. It is possible that students become anxious and stressed out about the use of technology, which in turns affects their ability to effectively learn the course material.

Table 2

*Correlations of Positive and Negative Aspects of Blended Learning and Factors that May Contribute to Blended Learning*

| Composite Variables                     | 1 | 2     | 3      | 4      |
|---|---|-------|--------|--------|
| 1. Positive Aspects of Blended Learning | - | -.001 | .302** | .215*  |
| 2. Negative Aspects of Blended Learning |   | -     | -.181  | -.236* |
| 3. Planning/Time Management             |   |       | -      | .569*  |
| 4. Comfort with Technology              |   |       |        | -      |

Since technology plays such a large role within a blended course, Table 3 focuses on student’s comfort with technology, showing the frequency of responses of the students in the present study to technology related items. Overall, it seems that, although the majority of students stated that they use a computer every day (94.4%), there were still students who stated that they struggled with the technologies in the course compared to a typical F2F class (24.6%). This is interesting as it alludes to the fact that, although the average student tends to be using technology quite often, he or she could still be nervous about doing particular assignments or activities with various technologies. This could in part be due to the fact that students are using computers for more basic tasks (typing essays, social networking, etc.) and are not comfortable in using specific program (such as Sakai) in the course. It is worth noting that while we might expect students to be technologically savvy, it could be that we underestimate the level of anxiety students experience when they encounter new technology for the first time.

Table 3  
*Frequencies of Ratings for Key Items*

| Item  | Strongly Agree/Agree | Neutral    | Disagree/Strongly Disagree |
|---|----------------------|------------|----------------------------|
| I am very comfortable with technology                                     | 79 (73.8%)           | 18 (16.8%) | 10 (9.3%)                  |
| I use computers daily   | 101 (94.4%)          | 2 (1.9%)   | 4 (3.7%)                   |
| I enjoyed taking this blended course                                      | 59 (53.6%)           | 28 (25.5%) | 23 (20.9%)                 |
| Compared to F2F courses, I have trouble using technologies in this course | 27 (24.6%)           | 13 (11.8%) | 70 (63.6%)                 |

### Reflections

The open-ended questions were designed to capture students' more nuanced experiences with the blended environment. In particular, we tried to capture how students lived their blended learning, what worked and what did not, and what particular aspect of the blended environment was beneficial to their learning. Also important were the students' reflections and suggestions regarding ways to improve future offerings. For instance, the present findings support and extend previous research (i.e., López-Pérez, Pérez-López, & Rodríguez-Ariza, 2011; Wichadee, 2013), showing that blended teaching can be pedagogically effective, as a large number of students report that one of the main benefits is the greater flexibility such a course provides and, to a lesser extent, the diversity in instructional modality. However, many students also reported challenges with keeping on track with the e-lectures and effectively engaging with the course content. In their research examining student perceptions of blended learning, Gedik, Kiraz, & Yasar Ozden (2012) found some of the main barriers to be an increased workload, potential technical issues and the dependence of the two environments on each other. The findings of the present study support some of these ideas, highlighting the shared concern of keeping up with the e-lectures in a timely and orderly fashion, and the related concern about dovetailing the F2F and the online components more effectively.

Also of interest (and somewhat related) is the advice offered regarding concerns with time management and the related issue of the proper engagement with the e-material. From an instructor's point of view, creating multiple bridges and connections between the online and the F2F components remains a challenge. A continuous effort is required to dovetail the two components so as to engage a broader spectrum of technological literacy and learning styles, using the best of what blended teaching has to offer to facilitate learning in the 21<sup>st</sup> century (see, for example, Garrison & Vaughan, 2008).

Blended courses offer opportunities to increase accessibility and learning, in part due to technological advances that did not exist before (see, for example, Kocoglu, Ozek, & Kesli, 2011). It is worth keeping in mind that, while advances in technology make it easier for material to be uploaded online, the same technology makes it easier to download an incredible amount of material onto students. There is little doubt that technological advances have changed the way course material can be presented to facilitate students' learning. As previous research has supported the idea that there are benefits to having technology in the classroom (Bernard, et al., 2014), this study, while showing that there are strengths to a blended course, highlights many of the struggles that students are faced due to this type of course delivery. It therefore becomes increasingly important for those developing courses with this delivery method to ensure that they

are taking these struggles into consideration, so as to provide opportunities for students to have greater success in their learning.

A rather interesting theme that emerged from the responses is the suggestion of the importance of the social aspect of pedagogy and the recommendation to keep connected with other students for peer and academic support. One could interpret this suggestion as highlighting the value of friendship in coping with and improving the academic experiences and reliance on friends as pedagogical prostheses (Garoian, 2013) to help keep the material and deadlines from becoming overwhelming. López-Pérez, Pérez-López, & Rodríguez-Ariza (2011) found that both the student perceptions of this type of course, as well as their final grades were affected by the blended learning activities utilized by the instructor, on the age of the student, as well as the attendance rate of the individual, underscoring the importance of proper pedagogy and engagement.

### **Pedagogical Implications and Recommendations**

We must keep in mind that, as some of the responses provided in this study indicated, it cannot be assumed that using blended teaching will get students more engaged, and for any course to be pedagogically effective, it has to be well-structured and well-designed. This means that it requires resources and is labour intensive, necessitating constant supervision and attentiveness to minute details in order to ensure that students are staying engaged in their learning. This high degree of vigilance is necessary to prevent confusion and to minimize the number of things that can be misunderstood or go in directions that are not intended. For instance, it is important for instructors to ensure that they are appropriately dealing with the paradox described in the results section, as it is clear that students seem to struggle with staying on top of content, but also enjoy not having a concrete schedule of class time.

As some of the comments from the students indicated, we still have to find ways to effectively engage and connect the material with the students. In other words, we should dispense with the notion that, just because it is easier to put material online, somehow the material will transfer effortlessly to students. Thoughtful pedagogy is still required, in fact, even more so. This means that the instructor has to be willing to invest a substantial amount of time to understanding and engaging the many elements of course digital design, such as management of online resources, class guides, online quizzes and homework, rubrics for papers/final projects/blogs/chat rooms. In addition, the instructor also has to take into consideration elements of more traditional pedagogy, such as understanding how to connect course material with students' prior learning, and allow appropriate practice and rehearsal time. Consideration also has to be given to what happens if material is not learned properly, and providing opportunities to remediate such an occurrence is critical to advance a student's learning.

Additionally, instructors need to take special consideration in checking in with students to ensure that they are properly learning course material. For example, within this type of delivery method, it becomes increasingly important for instructors to ensure that they make themselves available to students (i.e., weekly office hours, either F2F or electronically) since they will not be easily accessed before or after a lecture each week as in a strictly face-to-face model. Also, in this type of course it becomes even more important to properly assess student learning, specifically by ensuring that various types of assessment are being utilized, in order to ensure that students are not just simply reading online material, and instead are able to apply it.

## Limitations and Future Direction

While the responses in this study provide an informative narrative for the development and delivery of future blended courses, as with any study, this research does have some limitations that need to be noted. For instance, the present study relied on students' self-reports. Therefore, we are restricted to the perceptions and ideas of the students, specifically within one fourth-year course. Future research should examine a wider variety of courses taught in a similar manner, across multiple years, as well as adding an examination of the perspectives of both the institution and professors. It would also be interesting to consider if the subject matter or type of course (i.e., theoretical vs. practical) would have an effect on the learning with a blended course. Lastly, the qualitative responses were limited to open-ended written responses. This limits the amount of detail that can be obtained by the researcher. It would be beneficial for future research to expand to other methodologies, (i.e., interviews or focus groups) in order to gather a deeper understanding of the experiences and feelings of the students.

The issue of self-regulation was quite prominent throughout the responses students provided, and it is a central issue that needs more attention. There is a need to understand in greater depth how to ensure that students are reaping the benefits of this type of course delivery, while still ensuring that they are properly learning course content.

## Conclusion

While blended teaching has the potential to enrich higher education, it is important to be reflective and to adopt a questioning, critical, and empirical perspective. As mentioned in the introduction of this paper, while there is much excitement over the considerable potential of using blended teaching, it is important that we remain thoughtful and reflective in our pedagogical practice. As technology becomes increasingly prominent in our everyday world, it only makes sense that it finds its way into our educational system. Moving forward, it is important that educators take the worries and fears of the students into consideration and ensure that material (whether online or F2F) is consistently presented in a pedagogically useful and accessible manner, while taking into account how psychological constraints such as self-regulation can play a role in learning.

## References

- Barnard, L., Lan, W., To, Y., Paton, V., & Lai, S. (2009). Measuring self-regulated in online and blended learning environments. *Internet and Higher Education, 12*(1), 1-6.  
<https://doi.org/10.1016/j.iheduc.2008.10.005>
- Bele, J., & Rugelj, J. (2007). Blended learning-An opportunity to take the best of both worlds. *International Journal of Emerging Technologies in Learning, 2*(3), 29-33.
- Bernard, R., Borokhovski, E., Schmid, R., Tamim, R., & Abrami, P. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education, 26*(1), 87-122.  
<https://doi.org/10.1007/s12528-013-9077-3>
- Bonk, C. J., & Graham, C. R. (Eds.). (2006). *Handbook of blended learning: Global perspectives, local designs*. San Francisco, CA: Pfeiffer.

- Creswell, J. W. (2007). *Qualitative enquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.
- Cunningham C. A., & Billingsley M. (2003). *Curriculum webs: A practical guide to weaving the web into teaching and learning*. Boston, MA: Allyn and Bacon.
- Garoian, C. R. (2013). *The prosthetic pedagogy of art: Embodied research and practice*. New York, NY: SUNY Press.
- Garrison, D. R., & Vaughan, N. D. (2008). *Blending learning in higher education: Framework, principles, and guidelines*. San Francisco, CA: John Wiley & Sons.
- Gedik, N., Kiraz, E., & Yaşar Özden, M. (2012). The optimum blend: Affordances and challenges of blended learning for students. *Turkish Online Journal of Qualitative Inquiry*, 3(3), 102-117.
- Karal, H., Çebi, A., & Pekşen, M. (2010). Student opinions about the period of measurement and evaluation in distance education: the difficulties. *Procedia - Social and Behavioral Sciences*, 9, 1597-1601. <https://doi.org/10.1016/j.sbspro.2010.12.371>
- Kocoglu, Z., Ozek, Y., & Kesli, Y. (2011). Blended learning: Investigating its potential in an English language teacher training program. *Australasian Journal of Educational Technology*, 27(7), 1124-1134. <https://doi.org/10.14742/ajet.908>
- Lin, J. W., Huang, H. H., & Chuang, Y. S. (2015). The impacts of network centrality and self-regulation on an e-learning environment with the support of social network awareness. *British Journal of Educational Technology*, 46(1), 32-44. <https://doi.org/10.1111/bjet.12120>
- López-Pérez, M. V., Pérez-López, M. C., & Rodríguez-Ariza, L. (2011). Blended learning in higher education: Students' perceptions and their relation to outcomes. *Computers & Education*, 56(3), 818-826. <https://doi.org/10.1016/j.compedu.2010.10.023>
- Marini, Z. (2012). *Revised questionnaire on blended teaching and learning*. Unpublished Manuscript, Department of Child and Youth Studies, Brock University, St. Catharines, Canada.
- Masie, E. (2014). If the LMS could talk. *Chief Learning Officer*, 13(11), 10.
- McManus, T. F. (2000). Individualizing instruction in a web-based hypermedia learning environment: Nonlinearity, advance organizers, and self-regulated learners. *Journal of Interactive Learning Research*, 11(2), 219-51.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. Thousand Oaks, CA: Sage.
- Ross, B., & Gage, K. (2006). Global perspectives on blending learning: Insight from WebCT and our customers in higher education. In C. Bonk & C. Graham, (Eds.), *The handbook of blended learning: Global perspectives local designs* (pp. 155-168). San Francisco, CA: John Wiley & Sons.
- Schmid, R. F., Bernard, R. M., Borokhovski, E., Tamim, R. M., Abrami, P. C., Surkes, M. A., Wade, C. A., & Woods, J. (2014). The effects of technology use in postsecondary education: A meta-analysis of classroom applications. *Computers & Education*, 72, 271-291. <https://doi.org/10.1016/j.compedu.2013.11.002>
- Simsek, A. (2011). Interview with Tony Bates on the aspects and prospects of online learning. *Contemporary Educational Technology*, 2(1), 88-94.
- Wang, T. H. (2011). Developing web-based assessment strategies for facilitating junior school students to perform self-regulated learning in an e-Learning environment. *Computers & Education*, 57(2), 1801-1812. <https://doi.org/10.1016/j.compedu.2011.01.003>

- Wichadee, S. (2013). Facilitating students' learning with hybrid instruction: A comparison among four learning styles. *Electronic Journal of Research in Educational Psychology*, 11(1), 99-116.
- Zimmerman B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal*, 45, 166-183. <https://doi.org/10.3102/0002831207312909>