SFU | OFFICE OF THE
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MEMORANDUM

ATTENTION:	Senate
FROM:	Elizabeth Elle, Vice-Chair, Senate Committee on Undergraduate Studies
RE:	Blended Learning Assessment (SCUS 23-50)
DATE:	May 5, 2023

Action undertaken by SCUS on May 4, 2023, gives rise to the following recommendations:

Motion 1

That Senate approve the adoption of Blended courses as a permanent course section classification and expand the scheduling patterns available for use for the in-person component of blended courses.

Motion 2

That Senate approve as a two-year pilot, a new designation that replaces the in-person component of blended courses with a synchronous online component, provided the synchronous online component is scheduled during Low Utilization Period as defined in the Classroom and course scheduling procedures (e.g. 4:30 PM or later). The new designation will be called BLS, to distinguish from the typical BL courses.

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MEMORANDUM

ATTENTION:	Senate Committee on Undergraduate Studies
FROM:	Elizabeth Elle, Vice-Provost, Learning & Teaching
RE:	Blended Courses
DATE:	April 2023

Motion 1: Adopt Blended courses as a permanent course section classification and expand the scheduling patterns available for use for the in-person component of blended courses.

Motion 2: As a two-year pilot, permit synchronous online components in blended course offerings (to be called BLS) to replace the in-person component, where the synchronous online component is scheduled during Low Utilization Period as defined in the Classroom and course scheduling procedures (e.g. 4:30 PM or later).

Background

Blended courses at SFU are defined as having at least one quarter and no more than three quarters of student learning integral to the course occurring in the online environment, replacing in-person instruction. The online component is offered asynchronously.

In the Pilot period, the scheduling patterns were limited for the in-person component of blended courses (Appendix A). The pilot was delayed due to emergency remote teaching and the first Blended (BL) courses were offered in Spring 2022. The following table indicates the percentage of blended course section offerings compared to Online (OL) and Distance Education (C) course sections.

Term	#Total course sections offered	% Blended (BL) Sections	% Online (OL) Sections	% Distance Education (C) Sections
Spring 2022	1419	2.1%	3.9%	2.9%
Summer 2022	837	2.7%	7.4%	4.4%
Fall 2022	1397	3.9%	5.0%	1.3%
Spring 2023	1378	3.4%	4.9%	1.0%
Summer 2023	790	2.8%	9.0%	0%

The percentage of blended course offerings has increased calendar year over calendar year. We believe that there is capacity to offer more blended courses if instructors are interested in using this modality. Students have had positive experiences in blended courses, although there has been some confusion among instructors about the definition and its implementation. Instructors have also had positive experiences, although they note the high up-front workload associated with their creation (as is true for online courses). We have also heard that there is interest in exploring other ways to offer blended courses. In response, we are proposing the following to increase access to blended course offerings:

1. Expand the scheduling patterns permitted for use for the in-person component of blended courses.

   Currently, the patterns permitted are very limiting. We are proposing to permit any scheduling pattern in Schedule A: Standard Day Meeting Patterns to be used for the in-person component of blended courses. Priority for classroom bookings would be given to courses that make the most use of the space (e.g. a course that offers full classroom utilization at 100% in person, would be given priority over a course that offers less time in person). We recommend that units do their best to match Blended courses with similar patterns to each other to make efficient use of time and space patterns, and the central scheduling team will assist as resources allow.

2. As a two-year pilot, permit synchronous online components in blended course offerings (to be called BLS) to replace the in-person component, where the synchronous online component is scheduled during Low Utilization Period as defined in the Classroom and course scheduling procedures.

   The Scheduling Team has received requests for the synchronous component of blended courses, which is normally in person, to be available online instead. There are challenges for students, however, as contrary to the purpose of blended scheduling, synchronous online can reduce flexibility for students. Participating in synchronous online components that fall in between in-person courses can be difficult as it assumes students can find a quiet place with good wifi on our campuses from which to participate. It is similar to the challenges students face with attending back-to-back courses on different campuses. We know of cases where instructors had expectations for synchronous online participation, either as one-time exceptions or because of confusion about the scheduling policy. Anecdotally, we know some students chose to skip their in-person courses so they could leave campus to use wifi at home or to find another quiet location to take synchronous online quizzes.

   However, for some students in some programs, such as professionals participating in teacher education, having the benefit of a participatory experience which can only occur synchronously, but doing so online and thus avoiding travel to our campuses, would be more inclusive. We therefore recommend allowing the synchronous component of blended courses to be offered online, but only in the Low Utilization period, to reduce conflicts with other courses. Communication with students about expectations for "attending" online is essential.

Appendix A Scheduling Patterns Permitted for the 2-year pilot of Blended Course Offerings

The following patters were permitted for the Blended 2-year pilot period:
- Tutorials or laboratories only, no lectures (No pattern restriction)
- l hour lecture/week (Scheduling Pattern B, blocks Bl, B2 BJ [8:30}, Bf 3, B/4 [1:30], B18, Bf 9, B20 [3:30]
- I hour lecture and I hour tutorial/week (Scheduling Pattern B, blocks Bl, B2 B3 [8:30}, B13, B14 [1:30], B18, B19, B20 [3:30]
- 2 hours lecture/week (Scheduling pattern C all blocks)
- 2 hours lecture and I hour tutorial/week (Scheduling pattern C all blocks)
- 3 hours lecture/week {Scheduling pattern G.1/G.2 all blocks)
- Class meets for 2 or 3 hour lecture every other week for 6 weeks (Scheduling pattern C or scheduling pattern G.1/G.2. Requires pairing with another course to share alternating weeks)

BLENDED LEARNING ASSESSMENT REPORT FOR THE AVP-LEARNING & TEACHING, SPRING 2023

Kiran Bisra, Director of LEAP

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Alyssa Muzyk, Analyst
Alice Campbell, Program Assessment Specialist

Learning Experiences Assessment and Planning

EXECUTIVE SUMMARY

In Spring 2022, Simon Fraser University (SFU) launched a pilot of blended courses to support flexible education. As defined by the university, "Blended courses at SFU have at least one quarter and no more than three quarters of student learning integral to the course occurring in the online environment, replacing in person instruction." A total of 110 blended courses were offered in 2022.

Blended learning, and particularly the impact of blended course delivery on student learning, has been investigated across two terms:

- Spring 2022: Pre-course survey of blended learning instructors, a post-course survey of instructors, students and TAs involved in blended learning, and analysis of Student Experience of Teaching and Course (SETC) surveys.
- Fall 2022: Interviews with instructors and TAs who taught blended learning courses, content analysis of course outlines and analysis of Course Experience Surveys (CES).

The main research questions were:

1) What was the student experience in blended courses?
2) From the instructor perspective, how do blended courses support student flexibility?
3) From the TA perspective, how do blended courses support student flexibility?
4) What issues arose in the blended courses?

MAIN FINDINGS:

➢ Students expressed generally positive experiences with blended learning, with 47% reporting that they would take another blended course in future and a further 42% indicating that a course being blended would not impact their decision to take a course.
➢ Students pointed to flexibility as the key benefit of blended learning as it:
  o allowed them to save time and money on their commute to campus.
  o enabled them to set their own schedule, which could in turn allow them to take other courses.
  o allowed them to keep up with their courses by continuing the online component when they were unable to attend in-person.
  o enhanced accessibility for neurodivergent students.
➢ Challenges students reported included:
  o socializing and developing supportive relationships with peers in their class.
  o reduced time to interact with the course instructors face-to-face.
  o keeping up the pace with the expectations in the course; amount of work required (i.e. readings, assignments) was larger than they expected.
➢ Instructors and TAs echoed the benefits of flexibility for students, and outlined how the variety of learning activities in blended courses allowed for a rewarding learning experience.
➢ Issues related to the delivery of blended course include:
  o diverse range of course delivery models provided under blended courses
  o logistical roadblocks to teaching blended courses
  o shifting student expectations of the teaching team

- o workload management - note: Workload management challenges came up under different contexts for each stakeholder group. Instructors noticed that some students were not able to keep-up with the course expectations, while 20-25% of students felt the workload of the course was more than expected or heavy. TAs commented on how they were being asked to grade shorter, more frequent assignments – leading to some students falling behind.

CONTENTS

1. DATA COLLECTION & METHODOLOGY

Data was collected across two terms of blended learning instruction: Spring 2022 and Fall 2022. As this was an exploratory study, data collection and methodology were chosen each semester based on the results, gaps, and inconsistencies identified from previous analyses. An important consideration was the number of enrolled students each semester. Several methodologies (I.e. multiple regression) were removed from consideration because of the number of blended courses offered.

Table 1: Number of courses and registered students according to the Student Information Management System (SIMS)

Semester	Courses	Number of students
Spring 2022	31	1,255
Summer 2022	24	827
Fall 2022	55	2,490
Total	110	4,572

Note: The total number of students is the number of registered students and, as such, is not a count of unique students.

Spring 2022 was the first semester of the blended learning pilot. Four exploratory surveys (Blended Learning Assessment surveys, or BLA surveys) were administered to capture the instructor, student and teaching assistant (TA) experience with blended courses. Instructors received two surveys, one before the course began and one after the course ended. The first survey focused on how the instructors had prepared to teach a blended course. The second asked questions about how the course had unfolded over the semester. The student survey was designed to understand aspects of blended learning that are not captured in Student Experience of Teaching and Course (SETC) surveys. SETC surveys are administered in almost all SFU courses to collect student feedback about their learning experience in each course. The TA survey was designed to understand the impact of the blended learning modality on the TA experience.

Since the post-course BLA surveys were administered after the Spring 2022 semester, there was not sufficient time to analyze the results and implement a collection plan for Summer 2022.

Lastly, an interview methodology was employed in Fall 2022 for instructors and TAs in order to gain a deeper insight into their experiences and follow-up on the gaps that had been identified from the BLA survey data. Interviews can allow the research team to probe deeper into the lived experiences of the teaching team, and the semi-structured design of the interviews in this research project allow for new or unanticipated insights to come forth. The SETC program was retired and replaced with the Course Experience (CE) Survey program in Fall 2022. The question set from SETC changed when the CE Survey program was adopted. Student responses to CE Surveys were also collected and analyzed.

Table 2: Summary of data collection methods by term and stakeholder group

	Instructors	Students	TAs	Appendix
Spring 2022				
Blended Learning Assessment Pre-course Survey	X			B
Blended Learning Assessment Post-course Survey	X	X	X	C, D, E
Student Experience of Teaching & Course (SETC)		X		F
Fall 2022				
Interview	X		X	G
Course Experience Survey (CES)		X		H

Course outlines for blended courses were collected and analyzed to understand their alignment with the SFU definition of blended learning. Brian Lorraine, of the Centre for Educational Excellence (CEE), provided some initial analysis and data regarding course formats for blended learning at SFU.
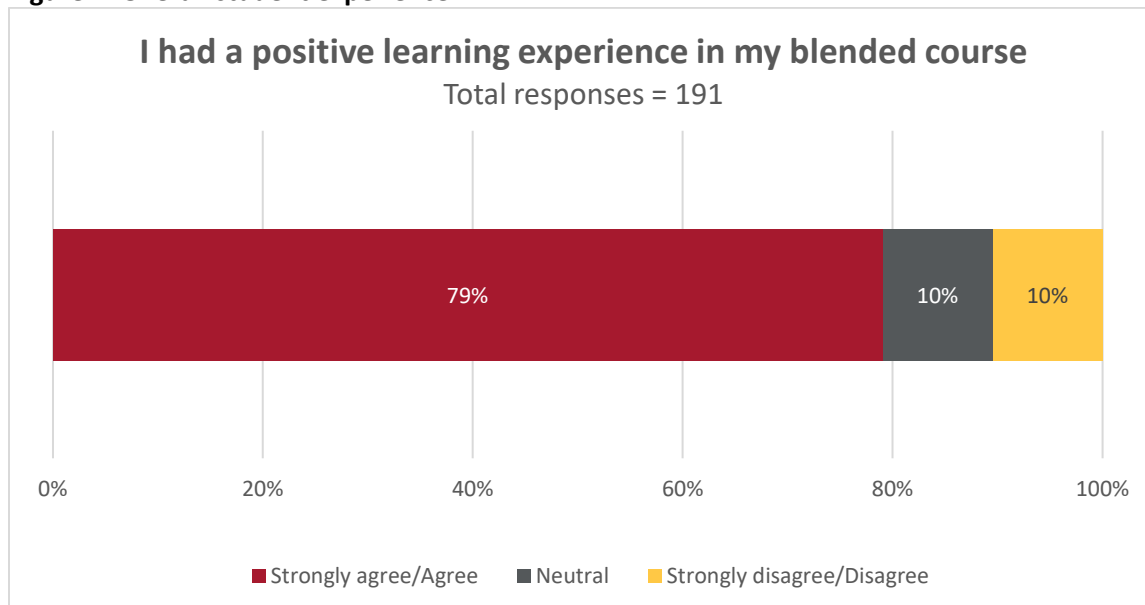
Further details about respondent profiles, response rates, and dates of administration can be found in Appendix A and G.

2. RESULTS

2.1 WHAT WAS THE STUDENT EXPERIENCE IN BLENDED COURSES?

About 80% of respondents to the Spring 2022 post-course BLA survey answered that they had positive experiences in blended courses, whereas 10% disagreed, indicating a negative learning experience. Students had similar levels of positive learning experiences across student sex and residency status (i.e., international, domestic).

Figure 1: Overall student experience

I had a positive learning experience in my blended course
Total responses = 191

79%	10% 10%

Legend: ■ Strongly agree/Agree ■ Neutral ■ Strongly disagree/Disagree

Students' responses to other questions were compared between those who reported a positive learning experience (n = 151) and those who reported a negative learning experience (n = 20). Students who reported a negative learning experience were more likely to report disagreement with the following statements

➢ I was able to easily interact/connect with other students in the class.

➢ I could see the connections between the in-person and online components.

➢ The process for submitting my assessments (i.e., exams, assignments, quizzes was easy).

About half of all surveyed students (47%) responded that they will try to enroll in another blended course. A similar proportion of students (42%) reported that the blended course format will have no impact on their decision. The preference for blended courses did not vary between student sex and residency status.

Figure 2: Student preference for blended courses after taking a blended course

Chart showing:
- I will try to enroll in blended courses. (N=68): 47%
- The course format being blended will have no impact on my decision to enroll. (N=60): 42%
- I will avoid blended courses. (N=16): 11%

(X-axis: 0%, 20%, 40%, 60%)
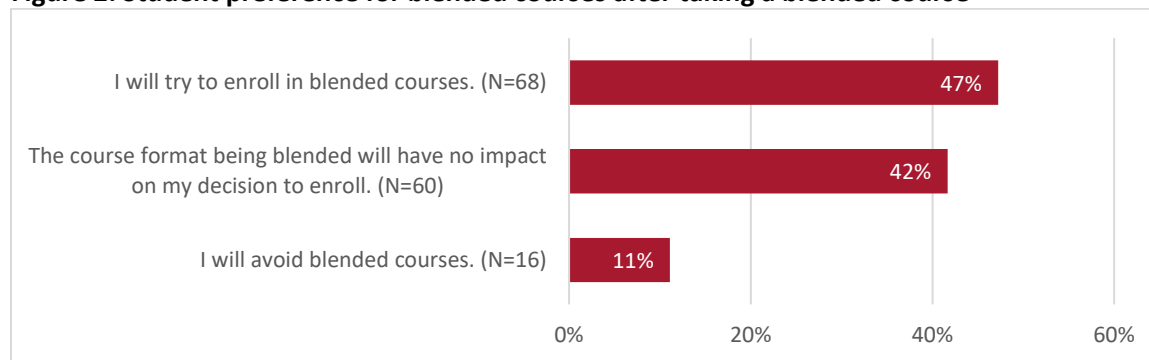
2.1.1 Benefits of blended learning courses

A large portion of students who answered the question "*What were the benefits for you of taking a blended course, compared to a non-blended course (fully in-person or fully online)?*" in the Spring 2022 BLA survey cited the flexibility that it provided them as a significant benefit to this form of learning. Students cited that the increased flexibility:

➢ allowed them to save time and money on their commute to campus.
➢ enabled them to set their own schedule, which could in turn allow them to take other courses.
➢ allowed them to keep up with their courses by continuing the online component when they were unable to attend in-person.
➢ enhanced accessibility for neurodivergent students.

"I loved being able to watch lectures at my own pace and on my own time rather than being 'forced' to attend lectures at a specific time and not pay attention. Having in person tutorials allowed me to interact with other students in my class as opposed to working on Zoom where nobody interacts with each other."

Also, the following student responses are of note:

➢ short lecture videos made lecture content easily digestible.
➢ valued having a variety of learning activities (readings, video documentaries, discussion posts).
➢ organized Canvas pages with learning materials that are easy to find and access was helpful.

2.1.2 Challenges of blended learning courses

When speaking to the challenges of blended learning in the Spring 2022 end-of-course student surveys (SETC) as well as in the post-course BLA survey, students primarily discussed how they connected with others (i.e. instructors, TAs, peers) in the course. They cited that blended learning created challenges in:

➢ socializing and developing supportive relationships with peers in their class.
➢ reduced time to interact with the course instructors face-to-face.

"A challenge would be not being able to socialize with my classmates and rely on one another for help when needed."

> keeping up to pace with the expectations in the course; amount of work required (i.e. readings, assignments) was larger than they expected.

2.1.3 Aspects of students' learning experiences

The Spring 2022 post-course BLA survey contained questions about various aspects of students' learning experiences in blended courses. 92% of students agreed that the process for submitting assessments was easy, while almost 80% could see the connections between the in-person and online components. 16% of students disagreed that it was easy to interact/connect with other students and 12% did not agree that their interactions with other students in the class helped them learn.
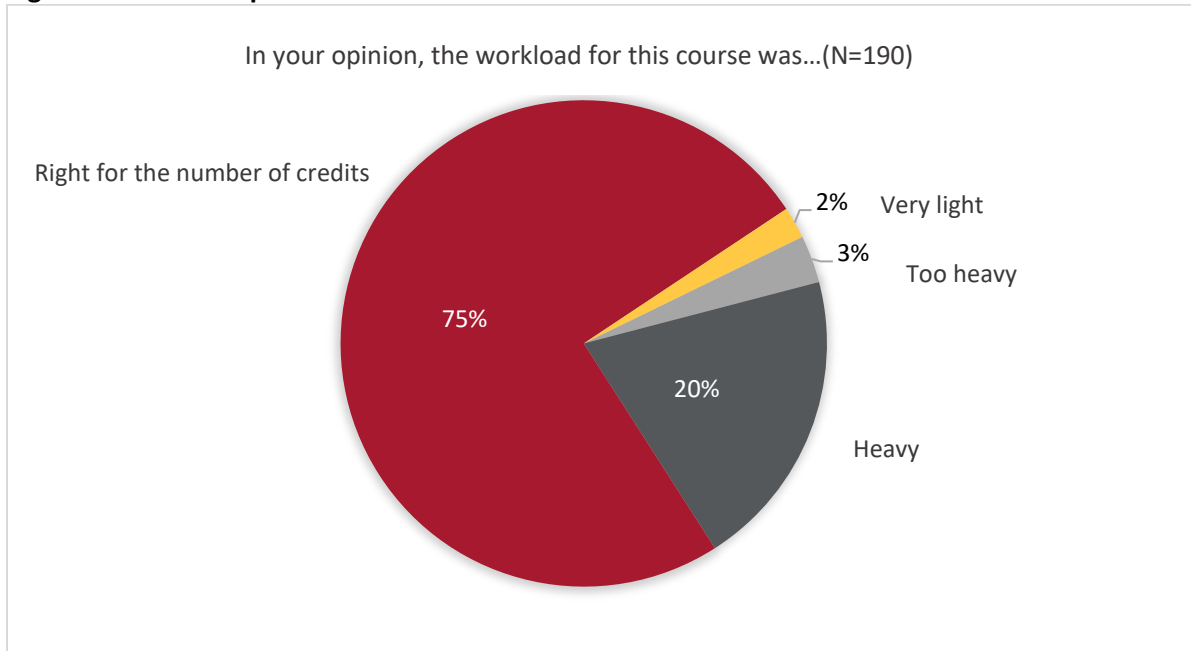
Figure 3: Breakdown of the student learning experience based on aspects of the course
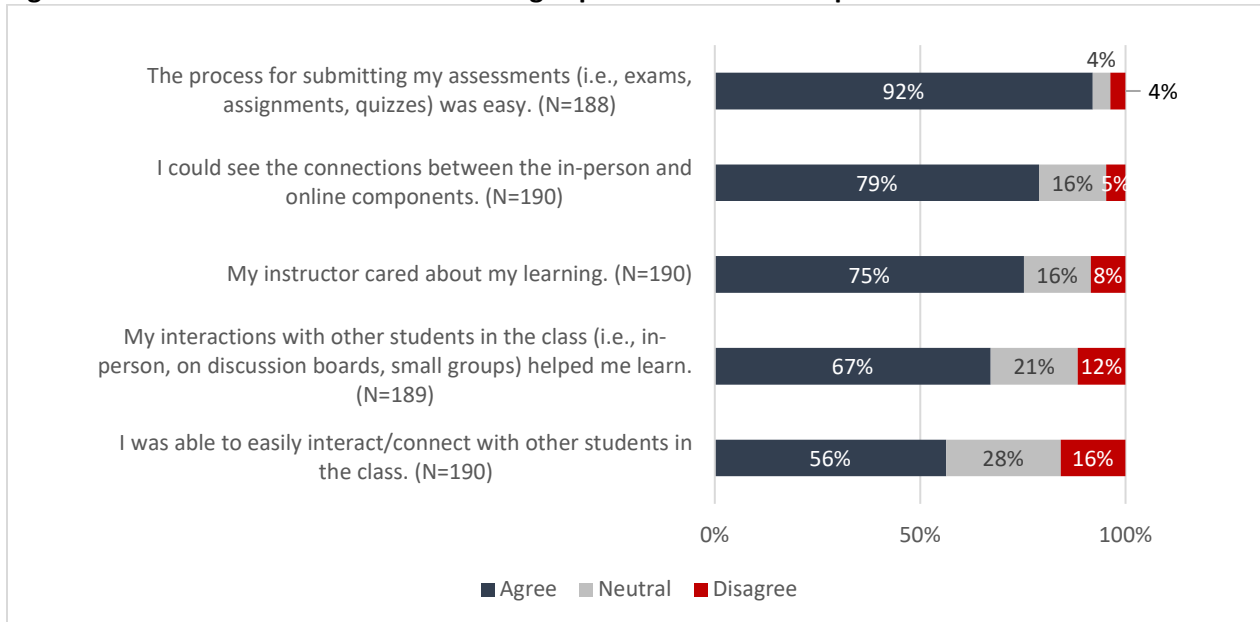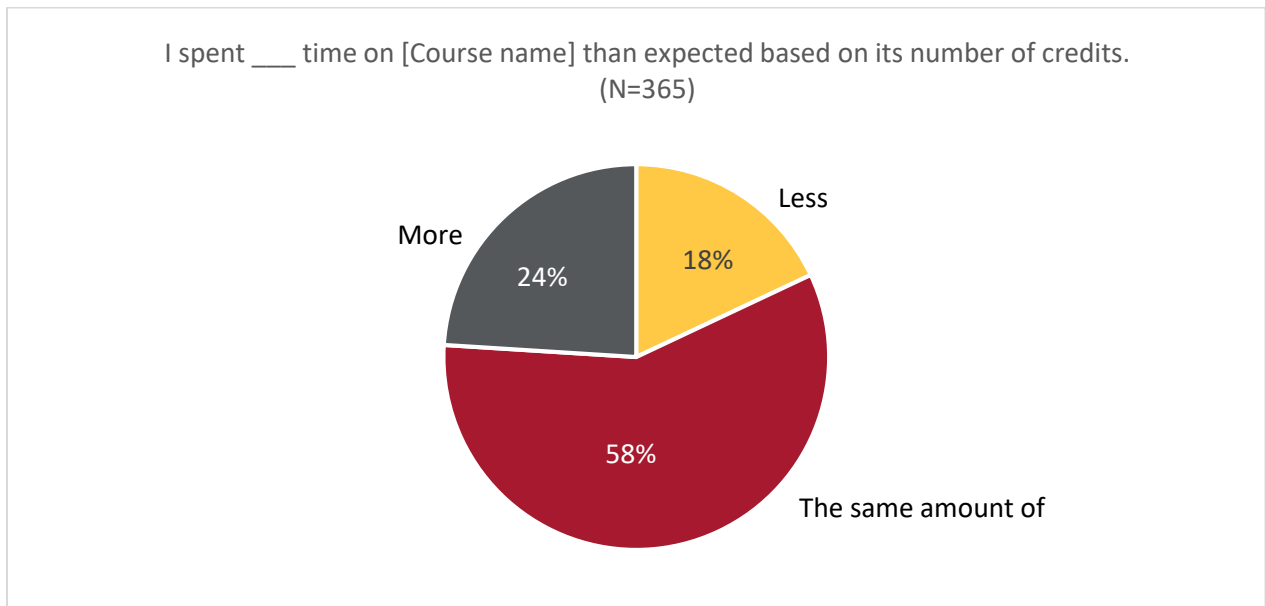

2.1.4 Workload

Three out of four students found the workload of the course was right for the number of credits (Spring 2022 post-course BLA survey). However, almost all of the remaining respondents perceived the workload to be "heavy" or "very heavy".

Figure 3: Student experience with course workload

In your opinion, the workload for this course was…(N=190)

Right for the number of credits

75%

20%

Heavy

2% Very light

3% Too heavy

A similar question appears on the Fall 2022 CE Survey. The question is "SFU defines 1 credit as comprising of 2-3 hours of a combination of in-class and self-study time per week. For example, if Physiology 101 is worth 3 credits, it would take 6-9 hours, on average, of a student's time each week. I spent _____time on [Course name] than expected based on its number of credits." Almost 1 out of every 4 respondents enrolled in blended learning selected "more time".

Figure 4: Student experience with course workload in Fall 2022 CE Survey

I spent ____ time on [Course name] than expected based on its number of credits. (N=365)

Less

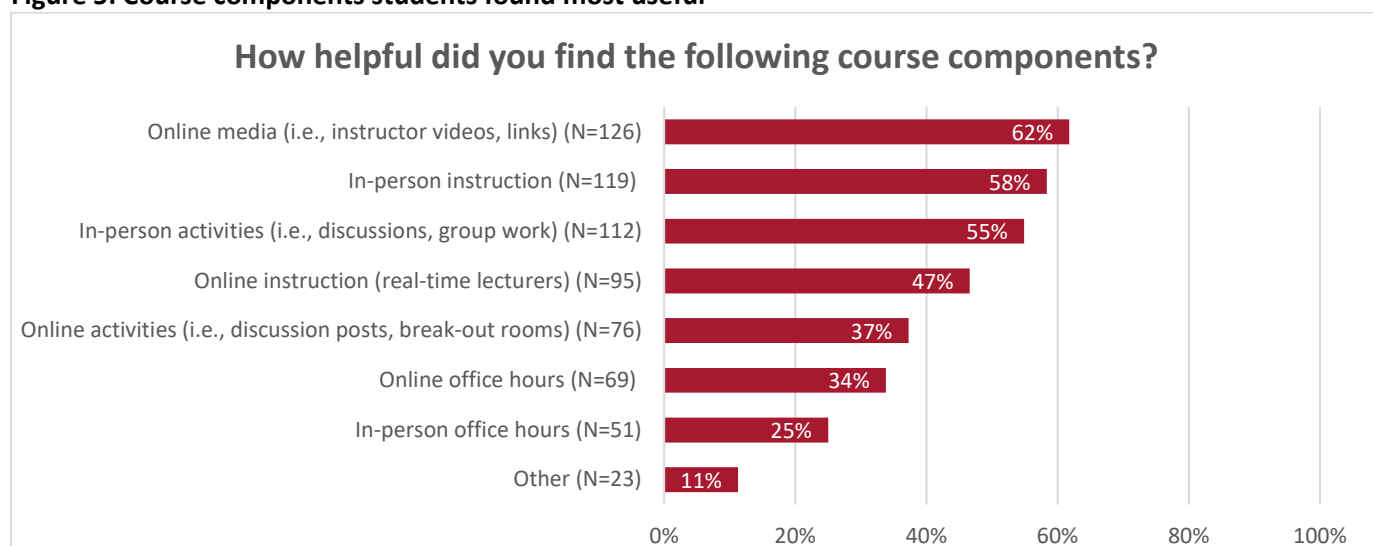More

24%

18%

58%

The same amount of

Interviewed TAs expressed that weekly or bi-weekly online assignments for students designed to gauge student progress also had the potential to add to their workload as TAs, with interviewees expressing they had more content to grade than they might have had during in-person courses. These TA observations support some students' claims that perhaps the workload was higher in blended courses than in-person.

2.1.5 Course components found most useful by students

Online media (62%) was seen as the most helpful course component, followed by in-person instruction (58%) and in-person activities (55%) in the Spring 2022 post-course BLA survey.

Figure 5: Course components students found most useful

How helpful did you find the following course components?

Component	Percentage
Online media (i.e., instructor videos, links) (N=126)	62%
In-person instruction (N=119)	58%
In-person activities (i.e., discussions, group work) (N=112)	55%
Online instruction (real-time lecturers) (N=95)	47%
Online activities (i.e., discussion posts, break-out rooms) (N=76)	37%
Online office hours (N=69)	34%
In-person office hours (N=51)	25%
Other (N=23)	11%

2.2 FROM THE INSTRUCTOR PERSPECTIVE, HOW DO BLENDED COURSES SUPPORT STUDENT FLEXIBILITY?

Results from Spring 2022 post-course BLA surveys and Fall 2022 instructor interviews are reported together as the same concerns and themes were identified. The following benefits were cited:
- ➢ access to recorded lecture videos or online resources allowed students to learn at their own pace.
- ➢ greater flexibility for students with busy schedules or absences.
- ➢ providing students with multiple ways to participate and engage in the course (i.e. through watching videos, having in-person discussions, using online activities)
- ➢ optimized in-person experiences because the time could be spent on discussion or applying course concepts (as opposed to delivering content).

➢   introducing students to new online learning resources that can be made use of in the future.

Instructors reported hearing from some students the following concerns or issues regarding delivery format:
➢   difficulty understanding guidelines or expectations.
➢   the desire for more interaction with the instructor.
➢   group work could be more challenging online than in-person (I.e. reluctance to use cameras when meeting; chunking and compiling pieces of a project rather than collaborating together).

2.3 FROM THE TA PERSPECTIVE, HOW DO BLENDED COURSES SUPPORT STUDENT FLEXIBILITY?

In the Spring 2022 post-course BLA survey, TAs echoed students in their appreciation of the flexibility a blended course provided. Often, they would highlight the benefits of not having to commute to campus to participate in parts of the course not directly assigned to them. These results were also found during the Fall 2022 TA interviews.

> "It was flexible, which I think benefitted the students as well as myself. I needed a bit of refreshing on the course content, but I'm also a full-time grad student. It was nice to just have the content there, for when I could go and access it, and I think that the same goes for students."

During the Fall 2022 interviews, TAs were asked to describe benefits of taking a blended learning course for students. TAs were particularly enthusiastic about the value of recorded lecture videos:

> "I think that having the online lecture component was a great study tool for them. I heard that from them when they were studying for midterms and finals, that it was really easy for them to reference lecture content because of the recordings."

2.4 WHAT ISSUES AROSE IN BLENDED COURSES THAT ARE UNIQUE TO THE DELIVERY FORMAT?

2.4.1   Range of blended course delivery models

Despite the expectation that blended courses would only contain asynchronous online and in-person components, there ended up being a wide range of course delivery models (see Table 4). For example, one course had an in-person course component with additional learning activities (creating discussion questions or extra readings) that do not appear to be integral to the course. This course was categorized as entirely in-person.

Table 3: Categorization of "B" courses based on asynchronous/synchronous delivery

Term	Online component			Taught entirely		Format undetermined	Total
	Asynch	**Synch**	**Both**	**Online**	**In-person**		
Spring 2022	18	2	2	0	0	9	31
Summer 2022	15	0	3	2	0	4	24
Fall 2022	32	2	7	2	3	9	55

When interviewed instructors discussed the definition of blended learning, the following results are of note:
➢ Some instructors were unaware of the SFU definition of blended learning
➢ There is disagreement about how blended courses should be delivered at SFU (i.e., should off-campus community activities be regarded as the online component, should a mix of synchronous and asynchronous online activities be regarded as a blend).
➢ One instructor had been unaware that their course was marked as blended in the course catalog.

Some students also spoke to their experience in blended courses where synchronous online learning comprised part of the blend. Two issues which came up were the student having difficulty connecting to wifi in order to access live course content and finding a quiet space to participate.

2.4.2 Logistical roadblocks for offering blended courses

Although most instructors who taught blended courses spoke positively of their experience with blended learning, one concern that was mentioned often during instructor interviews was encountering departmental and logistical roadblocks. For them, these roadblocks included:
➢ A lack of enthusiasm for the blended model from decision makers in academic units.
➢ Room booking; perceived hesitancy of departmental administration to only partially book rooms as it may be seen as forfeiting space, logistics around how to book a room within the system for only certain days, being encouraged to work with another course to share a room booking as to not leave space underutilized.

The Centre for Educational Excellence (CEE) began offering programming in 2021 to support instructors in developing and teaching blended courses. This included a 10-week blended learning course, followed sometimes by a semester of CEE support in course development.   Of the 35 instructors who completed CEE's blended learning course (Summer 2021, Fall 2021, Spring 2022 intakes), 25 (71%) did not, in 2022, instruct a blended course. When Brian Lorraine, Instructional Designer of Online and Blended Courses at CEE, asked them why they have not done so, the instructors mentioned:

➢ Academic unit was unwilling to offer blended courses
➢ Academic unit was unwilling to schedule blended courses in desirable time slots

- ➢ Academic unit was unwilling to schedule one course section of a multi-sectioned course as blended; the unit required that all course sections have the same delivery method
- ➢ Disciplinary accreditor only recognizing face-to-face contact hours
- ➢ Several were developing courses for a program that was not approved by the government.

2.4.3 Student expectation shifts within the Teaching Team

The main challenge discussed by TAs in the Spring BLA survey was an increased workload**,** particularly in cases where there was less in-person involvement from the course instructor (i.e., tutorials as the main in-person course component). Some TAs noticed a significant increase in the volume of emails they received from students. These sentiments were echoed in the Fall 2022 interviews.
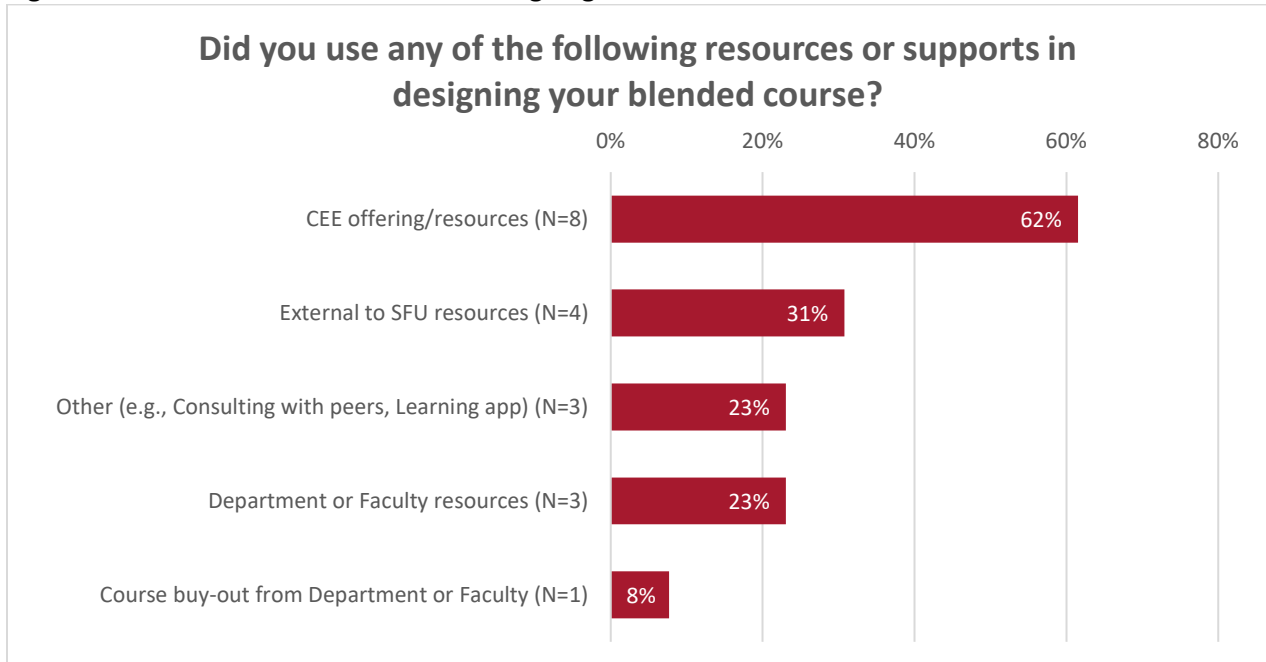
> "Students also often communicated with me via email instead of attending office hours or asking questions in tutorials. I find emails very time consuming to write and respond to; I much prefer answering questions and giving feedback on ideas in-person."

Perhaps students in a blended course expect their teaching team to be more available online or through emails as the number of in-person contact hours is decreased. Students may also feel more comfortable contacting the individuals within the teaching team they interact with or have met in person, thus leading them to rely more heavily on the TA for support in cases where the instructor does not have an in-person presence.

2.4.4 Support for teaching blended learning courses

Instructors responding to the Spring 2022 BLA survey most frequently used CEE offerings/resources (62%) to prepare for their blended course instruction. Among the instructors who choose CEE offering/resources, most of them accessed the CEE website (75%) or had individual consultations with CEE staff (63%).

Figure 6: Instructor use of resources in designing blended courses

Did you use any of the following resources or supports in designing your blended course?

Resource	Percentage
CEE offering/resources (N=8)	62%
External to SFU resources (N=4)	31%
Other (e.g., Consulting with peers, Learning app) (N=3)	23%
Department or Faculty resources (N=3)	23%
Course buy-out from Department or Faculty (N=1)	8%

We also compared the list of instructors who taught blended courses in 2022 with the list of participants in CEE's blended learning course or workshops. Of the 65 SFU instructors who taught a blended (B) course in 2022, a minority (25%) have participated in CEE's blended learning programming. Of these, 15% participated in CEE's 10-week blended learning course. An additional 9% participated in a blended learning workshop offered by CEE.

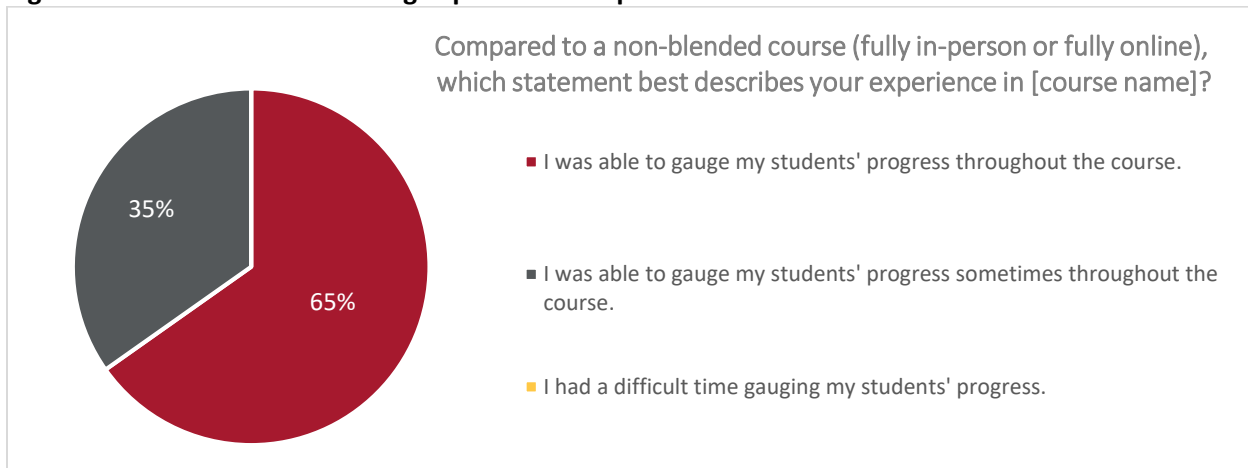When asked what resources they would like for blended learning, interviewees mentioned:

➢ drop-in CEE sessions for blended learning instructors.
➢ more funding for TAs/RAs.
➢ more help with learning technology in designing and delivering the course.

2.4.5 Gauging student progress

Instructors spoke about the ability to gauge student progress in a blended learning environment in both the survey and during interviews. Some felt that it was easier to track their students' progress, while others felt it was more difficult, and yet there were some who did not experience a difference when compared to in-person instruction.

When asked to compare their experience teaching a blended course with a non-blended course (fully in-person or fully online) in the Spring 2022 post-course BLA survey, 65% of respondents felt they were able to gauge their students' progress throughout the course.

Figure 7: Blended course teaching experience compared to a non-blended course

Compared to a non-blended course (fully in-person or fully online), which statement best describes your experience in [course name]?

- I was able to gauge my students' progress throughout the course.
- I was able to gauge my students' progress sometimes throughout the course.
- I had a difficult time gauging my students' progress.

Note: None of the instructors selected "I had a difficult time gauging my student's progress."

When instructors talked about the benefits of blended learning, some discussed the ability to gauge student progress in novel ways.

> "The…activities gave me an insight into the working patterns and thinking modalities of students, which I don't always have in face-to-face classes (some students are very quiet). I feel like I was able to follow them better in their progress."

Below is a listing of the tools and techniques that instructors used to gauge student progress in a blended learning environment:

- ➢ canvas analytics (i.e. seeing how many students were watching recorded lectures, when they were completing online activities, etc.).
- ➢ reviewing homework exercises submitted online.
- ➢ asking students to submit self-assessments.
- ➢ using learning applications such as H5P interactive slides.
- ➢ online discussion boards or forums. Regardless of whether the instructor was an active participant on the discussion boards, some stated that they were useful resources to read through when it came to understanding the level of student learning.

However, other instructors reported that managing student progress was a challenge and listed it as a downside of having less face-to-face contact with students.

> "Making sure they watch the lectures. (Just like trying to get students to go to class.) I used H5P questions, but found that the >50% of the students scrubbed to the questions and used trial and error until they got a right answer. That's a bit discouraging, so I will be using in-class quizzes moving forward."

> "The major challenge was lack of contact with students. I missed the real time questions that are part of a F2F lecture class and I also missed the after the lecture questions and interactions with students."

2.4.6 Changes to the course throughout the semester

Instructors had reported that there were challenges to making changes during the semester, in response to student feedback or progress, in a blended learning course in the Spring 2022 survey. This topic was probed further in the Fall 2022 interviews.

Interview participants noted that they are more likely to adapt components such as assessment format or timing, difficulty of assignments, or changes to the reading schedule. These changes did not require a substantial amount of work in the same way re-recording lectures mid-semester would, but did allow for adaption to student needs.

> "Adapting on the fly was very challenging in this format - I used the weekly discussion board posts as one way of meeting this challenge and I also sent out weekly announcements that at times addressed issues that arose during the course, but there isn't the same capacity as you have in a F2F class for changing a lecture in the moment because a question comes up that shifts where you want to put your focus."

3. APPENDICES

APPENDIX A: SPRING 2022 SURVEY DATES, RESPONDENT PROFILES & RESPONSE RATES

The BLA surveys were conducted to gather feedback about the new course format from instructors, students, and teaching assistants (TAs). They were deployed in two stages. Before the start of the Spring 2022 term, a pre-course survey was deployed (January 4 – 10th) to target the instructors' experiences in preparing to teach a blended course. At the end of the term, post-course surveys were deployed (April 27 – May 15th) for students, TAs, and instructors. Response rates were 15% for students (n=182), 30% for TAs (n=6), and 74% for instructors (n=17).

The respondent profiles for the BLA surveys are below:

Instructors

➢ The overall response rate for the pre-course survey is 70% and 74% for the post-course survey (Total invited = 23).
➢ Instructor rank of post-course survey respondents:
- 12% Professor
- 12% Associate professor
- 18% Assistant professor
- 47% Lecturer
- 12% Sessional instructor

Table 1: Instructor respondent profile

Course Faculty	Pre-course respondents	Post-course respondents
Arts and Social Science	13 (81%)	14 (82%)
Communication, Art, and Technology	1 (6%)	1 (6%)
Science	2 (13%)	2 (12%)
Total	16 (70%)	17 (74%)

Students

- The overall response rate is 15% (182 respondents out of 1226 invited).
- 92% Domestic and 8% International students
- 82% Female and 18% Male students

Table 2: Student respondent profile

Course Faculty	Number of respondents
Arts and Social Science	163 (90%)
Communication, Art, and Technology	14 (8%)
Science	5 (3%)
Total	182

Teaching Assistants (TAs)

- The overall response rate is 30% (Total invited = 20).
- All respondents had previously been a TA at least one course.

Table 3: TA respondent profile

Course Faculty	Number of respondents
Arts and Social Sciences	5
Communication, Art, and Technology	1
Total	6

APPENDIX B: BLENDED LEARNING PRE-COURSE SURVEY FOR INSTRUCTORS

	Question
Q1	Which aspects of [course name] will be offered online? Please select all that apply. • Asynchronous lecture (video recording), Synchronous lecture (in real-time), Online discussion board (e.g., Canvas forum), Learning resources (e.g., readings, videos, applications, website links), Discussion or activity in small groups, Assignments, Quizzes,

		Midterms/exams, Office Hours (1x1 or group), Tutorials or workshops, Labs, Experiential education component (I.e. fieldwork, community projects), Other _____
Q2	Which aspects of [course name] will be offered online? Please select all that apply.
	• Lectures, Seminars, Learning resources (e.g., readings, videos, applications, website links), Discussion or activity in small groups, Assignments, Quizzes, Midterms/exams, Office Hours (1x1 or group), Tutorials or workshops, Labs, Experiential education component (I.e. fieldwork, community projects), Other _____
Q3	How did you decide which aspects of your blended course, [course name], to offer in-person, and which to offer online? (Open comment)
Q4	Reflecting on the number of contact hours in your blended course, how many hours should be online and in-person?
	• Online _____, In-person _____
Q5	Besides [course name], is there another blended course you are teaching in Spring 2022?
	• Yes, No
Q6	How confident are you with teaching blended course(s)?
	• Not confident at all, Slightly confident, Somewhat confident, Fairly confident, Completely confident
Q7	What do you anticipate will be the benefits of teaching a blended course for yourself as an instructor, compared to non-blended courses (fully in-person or fully online)? (Open comment)
Q8	What do you anticipate will be the challenges of teaching a blended course for yourself as an instructor, compared to non-blended courses (fully in-person or fully online)? (Open comment)
Q9	What do you anticipate will be the benefits of taking blended courses for your students, compared to non-blended courses (fully in-person or fully online)? (Open comment)
Q10	What do you anticipate will be the challenges of taking blended courses for your students, compared to non-blended courses (fully in-person or fully online)? (Open comment)
Q11	Did you use any of the following resources or supports in designing your blended course?
	• Center for Educational Excellence (CEE) offering/resources, Course buy-out from Department or Faculty, Department or Faculty resources, External to SFU resources, Other _____
Q12	Which CEE offering(s) did you access? (Piped question: if CEE offering/resources selected above)
	• CEE website, Single session blended learning workshop(s), 10-week long Blended Learning Design Course, 2021 Symposium on Teaching and Learning, Individual consultations with CEE staff
Q13	Reflecting on your experience over the 10-week long CEE Blended Learning Course, what aspects did you find to be the most useful? (Open comment) (Piped question: if 10-week long CEE Blended Learning Design Course selected above)

Q14	Reflecting on your experience over the 10-week long CEE Blended Learning Course, was there anything you found to be ineffective, redundant or unhelpful? (Open comment) (Piped question: if 10-week long CEE Blended Learning Design Course selected above)
Q15	What could SFU or your Department provide to better support you in designing or teaching blended courses? (Open comment)

APPENDIX C: BLENDED LEARNING POST-COURSE SURVEY FOR INSTRUCTORS

	Question
Q1	Please name one blended course you taught in Spring 2022 (e.g., Math 250). You will have the opportunity to describe your experience in other blended courses later in the survey. (Open comment)
Q2	Typically, for [course name], how many hours a week did you spend time doing the following? • Face-to face instruction _____, Face-to-face facilitation of activities (I.e., discussions, group work) _____, Face-to-face office hours _____, Online instruction (real-time lectures) _____, Online facilitation of activities (I.e., responding to posts) _____, Online office hours _____, Other _____
Q3	Regarding [course name], please state your agreement with the following. (Scale = Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) • I had a positive experience teaching this course, My efforts in preparing and designing this course were worthwhile, The technology used in this course was reliable, The assessments I used in this course allowed my students to demonstrate their learning, I spent a significant amount of time preparing media for this course (I.e., instructor videos, selecting links)
Q4	Compared to a non-blended course (fully face-to-face or fully online), which statement best describes your experience in [course name]? • I was able to gauge my students' progress throughout the course, I was able to gauge my students' progress sometimes throughout the course, I had a difficult time gauging my students progress
Q5	In [course name], how did you gauge your students' progress? • Online _____, Face-to-face _____, Other _____
Q6	Did you make changes to [course name] (I.e., instructional strategies, lesson plans, assessment adjustments) during the term? • Yes, No
Q7	Describe the change(s) you made and why? (Open comment)

Q8	Some instructors find that teaching a course in a new format for the first time can be a lot of work. Now that you've taught [course name] once in the blended format, do you anticipate that the workload for teaching this course again in a blended format will be: • Greater than teaching it face-to-face, The same as teaching it face-to-face, Less than teaching it face-to-face
Q9	Please explain your response to the above question. (Open comment)
Q10	Some instructors find that teaching a course in a new format for the first time can be a lot of work. Now that you've taught [course name] once in the blended format, do you anticipate that the workload for teaching this course again in a blended format will be: • Greater than teaching it online, The same as teaching it online, Less than teaching it online
Q11	Please explain your response to the above question.
Q12	Besides [course name], is there another blended course you instructed in Spring 2022? • Yes [loop back to Q1], No
Q13	Which statement best describes you: If given a choice, • I would try to teach a blended course, The course format being blended will have no impact on my decision to teach the course, I will try to avoid teaching blended courses
Q14	Given your experience teaching a blended course in Spring 2022, how confident are you about teaching another blended course? • Completely confident, Fairly confident, Somewhat confident, Slightly confident, Not confident at all
Q15	What were the benefits of teaching a blended course for yourself as an instructor, compared to a non-blended course (fully face-to-face or fully online)? (Open comment)
Q16	What were the challenges of teaching a blended course for yourself as an instructor, compared to a non-blended course (fully face-to-face or fully online)? (Open comment)
Q17	What were the benefits of taking a blended course for your students, compared to a non-blended course (fully face-to-face or fully online)? (Open comment)
Q18	What were the challenges of taking a blended course for your students, compared to a non-blended course (fully face-to-face or fully online)?
Q19	What advice would you give other instructors designing or teaching a blended course?
Q20	What could SFU or your academic unit provide to better support you in teaching blended courses?

APPENDIX D: BLENDED LEARNING POST-COURSE SURVEY FOR TAS

Question
Q1 — Prior to Spring 2022, for how many courses have you been a Teaching Assistant (TA)? • 0, 1, 2, 3, 4, 5, More than 5
Q2 — Please name one blended course for which you were a TA in Spring 2022 (e.g., Math 250). You will have the opportunity to describe your experience in other blended courses later in the survey. (Open comment)
Q3 — Did you mark assessments (I.e., assignments, mid-terms, or final exams) for [course name]? • Yes, No
Q4 — For [course name], what were your TA duties? (Select In-person and/or Online (I.e., email, Zoom) • Assigned labs or tutorials, Facilitating discussions/discussion forums, Offie hours, Mid-term and/or final exam invigilation, Lectures, Attendance at planning/coordinating meetings, Assessment preparation or development assistance, Provided oral or written feedback
Q5 — How did the time needed for you work on [course name] compare with the base units assigned on your Time Use Guideline (TUG) form? • I spent less time on the course than the assigned base units, I spent the same amount of time on the course as the assigned base units, I spent more time on the course than the assigned base units
Q6 — Please explain your response to the question above. (Open comment)
Q7 — Regarding [course name], please state your agreement with the following. (Scale = Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree) • I had a positive experience being a teaching assistant in this course, The technology used in this course was reliable, I felt connected to my students (I.e., knew their struggles, frequent communication), I think the face-to-face course component(s) helped students learn, I think the online course component(s) helped students learn, The course instructor provided enough guidance for me to do my job
Q8 — Besides [course name], is there another blended course for which you were a TA in Spring 2022. • Yes [loop back to Q2], No
Q9 — Which statement best describes you: If given a choice, • I will try to be a TA for blended courses, The course format being blended will have no impact on my decision to be a TA, I will try to avoid being a TA for blended courses
Q10 — Given your experience being TA in Spring 2022, how confident are you about being a TA for another blended course? • Completely confident, Fairly confident, Somewhat confident, Slightly confident, Not confident at all

Q11	What were the benefits of being a TA in a blended course, compared to a non-blended course (fully face-to-face or fully online)? [if Q1 > 1] (Open comment)
Q12	What were the benefits of being a TA in a blended course? [if Q1 <= 1] (Open comment)
Q13	What were the challenges of being a TA in a blended course, compared to a non-blended course (fully face-to-face or fully online)? [if Q1 > 1] (Open comment)
Q14	What were the challenges of being a TA in a blended course? [if Q1 = < 1] (Open comment]
Q15	What were the benefits of taking a blended course for your students, compared to a non-blended course (fully face-to-face or fully online)? (Open comment)
Q16	What were the challenges of taking a blended course for your students, compared to a non-blended course (fully face-to-face or fully online)? (Open comment)
Q17	At the beginning of the term, did you feel prepared to TA a blended course? • Yes, Somewhat, No, Unsure
Q18	What resources have you used or training that you have received to improve your knowledge or skills as a TA? • Center for Educational Excellence (CEE) TA/TM Day, CEE Website, Department or Faculty resources, Other ____
Q19	How helpful did you find the following in a blended course? [piped from above] (Scale = Very Helpful, Helpful, Not that Helpful, Not Helpful at all) • TA/TM Day, CEE Website, Department or Faculty resources, Course instructor, Other ____
Q20	What supports or resources could SFU or your department provide to better support you in being a TA for blended courses? (Open comment)
Q21	Do you have any further comments about your experience as a TA for a blended course? (Open comment)

APPENDIX E: BLENDED LEARNING POST-COURSE SURVEY FOR STUDENTS

	Question
Q1	Please name a blended course you took in Spring 2022 (e.g., Math 250). If you took more than one blended course, we will give you the opportunity to describe your experience later in the survey. (Open comment)
Q2	Reflecting on your experience in [course name], please rate your agreement with the following statements: (Scale = Strongly Agree, Somewhat Agree, Neither Agree nor Disagree, Somewhat Disagree, Strongly Disagree)
	• I had a positive learning experience in my blended course, My interactions with other students in the class (I.e., in-person, on discussion boards, small groups) helped me learn, I was able to easily interact/connect with other students in the class, My instructor cared about my learning, I could see the connections between the face-to-face and online components, The process for submitting my assessments (I.e. exams, assignments, quizzes) was easy
Q3	In my opinion, the workload for this course was...
	• Too heavy, Heavy, Right for the number of credits, Light, Very right
Q4	How helpful did you find the following course components? (5 = very helpful and 1 = not at all helpful, 0 = Did not experience)
	• Face-to-face instruction, Face-to-face activities (I.e. discussions, group work), Face-to-face office hours, Online instruction (real-time lectures), Online activities (I.e. discussion posts, breakout rooms), Online media (I.e. instructor videos, links), Online office hours, Other ____
Q5	Did your instructor make changes to [course name] (I.e., instructional strategies, lesson plans, assessment adjustments) during the term?
	• Yes, No
Q6	What was the change(s) your instructor made to [course name] during the term and how did it make you feel? [piped from Yes above] (Open comment)
Q7	Did you have a Teaching Assistant for [course name]?
	• Yes, No
Q8	What did your Teaching Assistant do well to support your learning? [if "yes" above] (Open comment}
Q9	What could your Teaching Assistant have done to better support your learning? [if "yes" above] (Open comment)
Q10	Besides [course name] did you take another blended course? If you select "Yes" you will be taken back to the start of the survey to give your feedback on another course. Responses from [course name] have been saved.
	• No, Yes [pipe back to Q1]
Q11	What were the benefits for you of taking a blended course, compared to a non-blended course (fully in-person or fully online)? (Open comment)

Q12	What were the challenges for you of taking a blended course, compared to a non-blended course (fully in-person or fully online)?
Q13	Which statement best describes you: When registering for courses in the future... • I will try to enroll in blended courses, The course format being blended will have no impact on my decision to enroll, I will avoid blended courses

APPENDIX F: SETC UNIVERSITY-WIDE QUESTION SET IN SPRING AND SUMMER 2022

Note. In Q4 – Q11, response categories are Strongly disagree = 1, Disagree = 2, Neutral = 3, Agree = 4,

	Question
Q1	How easy was this course? • Very hard = 1, Hard = 2, Medium = 3, Easy = 4, Very easy = 5
Q2	How many of the course activities/components (i.e. watched lectures, contributed to discussions, assignments) did you complete? • None = 1, Not very many of them = 2, About half of them = 3, Most of them = 4, All of them = 5
Q3	Overall, the quality of my learning experience in this course was • Very poor = 1, Poor = 2, Fair = 3, Good = 4, Very easy = 5
Q4	The different course activities/components (lectures, discussions, assignments, etc.) were connected.
Q5	Course materials (textbooks, library articles, and website links) improved my understanding of the course content.
Q6	Course activities/components (lectures, discussions, assignments, etc.) helped me learn.
Q7	The course instructor explained course concepts clearly.
Q8	The course instructor created a respectful learning environment.
Q9	The course instructor was approachable when I needed help.
Q10	The assessments in this course (tests, assignments, essays, etc.) allowed me to demonstrate my understanding of the course content.
Q11	The course instructor explained grading criteria clearly.

Strongly agree = 5.

APPENDIX G: FALL 2022 INTERVIEW PROTOCOLS

Interviews were selected as they would allow us to better understand the depth of individual experiences with blended learning. Thirty-minute interviews with a semi-structured protocol were employed for both instructors and TAs. As interviews were conducted during the Fall 2022 exam period and early Spring 2023, an online format (through Zoom) was selected to allow for easier scheduling during a busy time. A semi-structured protocol allowed the interviewee to address relevant topics whilst providing the researcher flexibility to adapt follow-up questions to unexpected findings. Interview time slots were kept to 30-minutes to encourage participation in the study as a longer time commitment may not be possible for some instructors.

Instructors who taught blended learning for the first time in 2022, alongside instructors who have taught multiple blended learning courses were put into a pool to invite for interviews. First time instructors were sampled to allow the research team to speak to instructors who were new to the experience of blended learning and may have first-time insights, whereas instructors who had taught multiple blended learning courses were sampled in order to better understand a more comparative experience of blended learning instruction (i.e. changes in preparation between the first and second iteration of a course). Invitations were sent to 10 instructors, chosen at random, who had taught at least one blended course before Fall 2022. A further 10 invitations were sent to at random to instructors who were teaching a blended course for the first time in Fall 2022. Interviews were conducted with all participants who could schedule an interview during the designated time frame for data collection. Six instructors from each group responded and were scheduled for an interview. In the end, there was a total of 12 instructors and 8 TAs who were interviewed.

There is no existing database of TAs who have assisted with blended learning courses, and individual instructors needed to be contacted to determine the names of their TAs and build a list of blended learning TAs. With less information available on TA history for blended learning courses, our sample was limited to TAs who worked on a blended learning course in Fall 2022. A random sample of 20 TAs from Fall 2022 were contacted, and 8 TAs were interviewed in total, representing 7 different course sections.

Interviews were transcribed upon completion and then coded in NVivo using an inductive approach, with new codes being developed directly from the interview data.

Instructor Protocol - Preamble

Thank you so much, again, for taking the time to speak with us today. My name is {name} and I work as part of the Learning Experiences Assessment and Planning team. We are looking to get a better understanding of how blended learning courses at SFU are working, and importantly how they are impacting student learning, so your experience is very valuable to us.

Today we'll be working through some questions surrounding your experiences as a blended learning instructor. Before we get started with the questions, I just wanted to double check with you that you are

for me to record this interview? This will help us to make a transcript of our interview later. [Confirm consent].

Great, do you have any last questions before we get started?

Our first questions will largely focus on the overarching details of the blended learning courses you have taught to help give us a bit of context for some details we will discuss later in the interview.

Introductory Questions – History of Blended Learning

- Can you confirm that you taught [insert course name] in a blended format in Fall 2022?
  - [If they've taught multiple, confirm other courses they've taught blended and when]
- For [course name, Fall 2022 BL course], could you describe how you delivered the course in the blended format?
  - Which activities were delivered remotely?
  - Which activities were delivered face-to-face?
  - What brought you to teach a blended learning course?
  - What worked well for you and your students?
    - *Probe to make sure we understand both what worked for THEM and the STUDENTS*
  - What would you change in the future?
    - *Probe to make sure we understand both what was challenging for THEM and the STUDENTS*

Questions on most recent experience

Student Learning

- Did your students find it difficult to keep up with the course?
  - [If yes] What course components or activities did you find were most difficult for your students to keep up-to-date on?
  - Are there any strategies you used to encourage students to stay up to date?
- How did you gauge student progress in the course? (*Probe: Online, face-to-face, other)*?
  - Did you notice any differences in gauging student progress in a blended format as opposed to a fully remote or fully face-to-face course?

Preparation

- [If this is a course they have taught in a blended format before] Could you tell me a bit about how you prepared to deliver this course in Fall 2022?
  - How did your preparation for this term compare to how you prepared the first time you taught this course in a blended format?

- o If you were to teach this course in a blended format again, what would you do to prepare?
- [If this is a course they have not taught in a blended format before] Could you tell me a bit about how you prepared to deliver this course?
    - o Now that you've taught [course name] in a blended format, what do you anticipate your preparation would look like if you were to teach this course in a blended format again?
- What resources did you use in preparing for this course?
    - o *Can prompt with CEE resources, websites, colleagues, etc.*
- What resources or other forms of support could the university or your department provide?

Changes to Course

- We're curious about the ability to adapt courses to student needs in the blended environment. Did you make any changes to [course name] during the term?
    - o Could you tell me a bit more about the changes? (*Probes: Why did you make these changes? What impact did they have*?)

Comparative Questions – How did experiences differ

Specific comparative question

- Thinking about your current experience teaching [course name] and your past experiences teaching blended courses, were there any key differences you would like to highlight?

General questions

- If given the option, would you teach a blended course again? Why or why not?
- Do you have any other comments on your experiences teaching blended learning?

TA - Preamble

Thank you so much, again, for taking the time to speak with us today. My name is {name} and I work as part of the Learning Experiences Assessment and Planning team. We are looking to get a better understanding of how blended learning courses at SFU are working, and importantly how they are impacting student learning, so your experience is very valuable to us.

Today we'll be working through some questions surrounding your experiences as a blended learning TA. Before we get started with the questions, I just wanted to double check with you that you are for me to record this interview? This will help us to make a transcript of our interview later. [Confirm consent].

Great, do you have any last questions before we get started?

Our first questions will largely focus on the overarching details of the blended learning courses you have been a TA for, to help give us a bit of context for some details we will discuss later in the interview.

Introductory Questions – TA History

- Confirm what course they were a TA for in Fall 2022 – how many students in the course, how many did you work with?
- Have you been a TA before Fall of 2022?
    - If yes, which courses have you been a TA for? What was the delivery modality of those courses (online, blended, face-to-face)?
- For [course name, Fall 2022 BL course], could you describe the format of the course?
    - Which activities were delivered remotely?
    - Which activities were delivered face-to-face?
    - What were your main tasks as a TA? (e.g. leading tutorials or labs, mark exams, write exams, 1:1 support to students, office hours, manage Canvas or other online learning tools)
    - What worked well for you and your students?
    - What would you change in the future?

Student Learning

- Did your students find it difficult to keep up with the course?
    - [If yes] What course components or activities did you find were most difficult for your students to keep up-to-date on?
- Do you have any other comments surrounding student learning in blended courses?

Workload and preparation

- Could you tell me a bit about how you prepared to TA for this course in Fall 2022?
    - [If they have TA's previously] How did your preparation for this term compare to how you prepared other TA experiences you've had?
    - If you were to TA for a course in a blended format again, what would you do to prepare?
- What resources or other forms of support could the university or your department provide?
- Do you have any other comments about preparing to TA in blended learning courses?

General questions

- If given the option, would you be a TA for a blended course again? Why or why not?
- Do you have any other comments on your experiences as a TA for blended learning courses?

APPENDIX H: CE SURVEY COMMON CORE QUESTION SET IN FALL 2022

	CE Survey Common Core Question
Q1	SFU defines 1 credit as comprising of 2-3 hours of a combination of in-class and self-study time per week. For example, if Physiology 101 is worth 3 credits, it would take 6-9 hours, on average, of a student's time each week. I spent _____ time on [Course name] than expected based on its number of credits. • Less = -1, The same amount of = 0, More = 1
Q2	I found this course to be… • Not challenging = -1, The right level of challenge for me = 0, Too challenging = 1
Q3	How comfortable did you feel approaching [Instructor name] (in person or online)? • Not at all comfortable = 1, Somewhat comfortable = 2, Completely comfortable = 3, Didn't contact to the instructor (Not scored)
Q4	How often did you understand [Instructor name]'s explanations of course concepts? • Almost never = 1, Rarely = 2, Sometimes = 3, Often = 4, Almost always = 5
Q5	I felt [instructor name] tried to support student learning. • Almost never = 1, Rarely = 2, Sometimes = 3, Often = 4, Almost always = 5
Q6	I felt engaged by [instructor name]'s teaching approach • Almost never = 1, Rarely = 2, Sometimes = 3, Often = 4, Almost always = 5
Q7	Was it clear to you how your work (i.e., assignments, essays, tests) would be graded? • Almost never = 1, Rarely = 2, Sometimes = 3, Often = 4, Almost always = 5
Q8	Did the assessments reflect what you were taught (i.e., learning activities, concepts, materials)? • Not at all = 1, A little = 2, Somewhat = 3, Mostly = 4, Very much = 5

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