

# Teaching a HyFlex Class for the First Time: What to Expect

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## Accepted

June 6, 2025

## Citation

Orchard, L. X., Grant, D. M., & Hannah, A. (2025). Teaching a HyFlex class for the first time: What to expect. *Journal of Research in Business Education*, 65(1)

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## Acknowledgement

The authors thank Dr. Andrew F. Siegel for his time and statistical expertise and Dr. Keith E. Miller and Dr. Reza Kheirandish for their invaluable input and feedback.

## Abstract

This paper provides advice to business instructors who will be preparing and delivering a HyFlex class for the first time. This small-scale exploratory study investigates student evaluations of the instructor and course the first time two professors taught HyFlex accounting business classes and compares those results with results obtained when they taught the same classes in a non-HyFlex (online asynchronous) delivery mode. Outcomes are also compared across the two concurrently-taught sections of the same HyFlex class where possible. Results show that average instructor evaluations were significantly lower in the online-attendance-only section of one HyFlex class compared with the in-person-attendance-allowed section of the same HyFlex class. There is weak evidence that average course evaluations were significantly lower in the HyFlex section of another class than in the non-HyFlex (asynchronous) section of that same class. There were no other significant differences found in instructor or course evaluations.

**Keywords:** *first-time HyFlex; instructor evaluations; course evaluations*

The number of colleges of business offering HyFlex classes has increased in recent years. A HyFlex (or Hybrid-Flexible) class may be defined as a class in which some students “may choose to attend face-to-face synchronous class sessions in-person (typically in a traditional classroom) or complete course learning activities” remotely online. Some HyFlex courses allow students attending class online a choice of delivery modes – i.e., either synchronously or asynchronously (Beatty, 2019, p. 35). Thus, HyFlex classes offer students as many as three modalities for attending class: face-to-face live, online live (synchronously), and online prerecorded (asynchronously). Importantly, in a HyFlex class, students generally have the flexibility to move across all three modalities as they need or wish to. Some schools restrict attendance in face-to-face live modality to students who have registered to take classes face-to-face (and paid any requisite fees for the right to do so, such as parking fees).

An advantage to business schools of offering HyFlex classes is that offering a single section of a HyFlex class accommodates the preferences and needs of students regardless of their preferences among the three modes of delivering course content. This increases the efficient deployment of faculty in terms of the number of sections of a class that need to be offered. Another important advantage to business schools of offering HyFlex classes is that doing so offers a potential way of increasing or stabilizing enrollments at a time of decreasing enrollments across many universities (Conley, 2024).

This paper provides advice to business instructors who will be preparing and delivering a HyFlex class for the first time, based on two of the authors’ first-hand experiences. It also compares outcomes from those same authors’ first accounting business classes taught in HyFlex format with the outcomes from non-HyFlex sections of those same two classes, taught by the same instructors in the prior (non-summer) semester. Those outcomes consist of student evaluations of the course and instructor. Thus, the paper offers instructors first-hand knowledge of what they might expect as they prepare to teach and actually teach a HyFlex business class for the first time.

## **Literature Review**

In a non-HyFlex context, a number of studies compare student achievement across various delivery modalities. Such studies yield apparently conflicting results on whether delivery modality affects student success in the class, other things equal. Some studies show no significant difference in student achievement between in-person vs. online classes (Meyer, 2004; Mullen, 2020; Simonson, 2002; Zhao et al., 2005), whereas others revealed only small differences between the two (Umutlu & Akpınar, 2020). For example, Means et al. (2013) found that online students performed slightly better than students in face-to-face classes. On the other hand, online courses tend to negatively impact student grades (Bettinger et al., 2017). As a result, it is difficult to draw broad conclusions about whether, other things equal, student achievement is higher in online vs. in-person classes because of a variety of possible factors that are difficult to control for (Larson et al., 2023; Xu & Xu, 2019).

HyFlex courses were introduced in 2006 by Brian Beatty (Beatty, 2019), and they have become much more prevalent since the COVID pandemic (Lederman, 2020; Keiper et al., 2021; Kohnke & Moorhouse, 2021; Raman et al., 2021). HyFlex courses offer both advantages and disadvantages, as Kohnke and Moorhouse (2021) found that students liked the flexible option to choose their learning style, but they also claimed that the HyFlex model was not as productive as in-person offerings, and communication can sometimes be an issue. Prior studies have found no significant differences between student achievements in HyFlex vs. in-person and/or online courses (Green, 2021; Mentzer et al., 2023; Miller et al., 2013).

Hybrid classes, also known as blended classes, meet both face-to-face and online, often once per week each, where the online component will usually be either synchronous or asynchronous. Weldy (2018) found that business school students prefer traditional in-class offerings over blended or online offerings. Students also claimed that they learn more in person, spent more time studying, and obtained higher grades when taking a course in person. The majority (88%) surveyed stated that online courses require more self-teaching, but only 9% feel that way about blended course designs. Arbaugh et al. (2009) performed a robust review of each business discipline and examined learning outcomes in online and blended modalities. They state that many researchers look at works in their specific discipline when investigating online and blended course modalities, but business researchers could benefit from general business research. Cosgrove and Olitsky (2015) tested learning and knowledge retention for online and blended courses in economic principles courses. They found no difference in learning, but in-class offerings improved retention. Here's how Cosgrove and Olitsky (2015) summed up blended learning: "Blending has the potential to give students the best aspects of traditional classes and online classes without the drawbacks of either."

Adult student learning options need to be flexible (Koskinen, 2018) as adults prefer a self-directed approach to their learning choice (Knowles, 1984). Research has shown that the traits of individual students (such as self-motivation, learning goals and interests) affect engagement (Martin et al., 2020), and student engagement plays a critical role in student success (Kahu & Nelson, 2018; Toma & Berge, 2024; Trowler et al., 2022). Researchers believe that the HyFlex model has potential, but its success depends on many factors, such as course design, instructor delivery, and student engagement (Bartolata et al., 2024; Raes et al., 2019).

### **Research Questions**

Student evaluations of instructors play a significant role in higher education, as they offer feedback to the instructor, while also providing administration with data on an instructor's performance and their effectiveness in delivering the course material (Marzano & Allen, 2016). Prior research has shown that student evaluations of courses and/or instructors are lower in online courses versus in-person courses (Bhave & Murthi, 2024; Bono et al., 2025; Marzano & Allen, 2016; Rovai et al., 2006; Young & Duncan, 2014). Since HyFlex courses offer a flexible learning format by combining in-person and online instruction, the authors were interested in the impact of HyFlex instruction on instructor and course evaluations. While prior studies

document what students liked and disliked about HyFlex courses (Buckley et. al, 2024; Eduljee et al., 2023; Kohnke & Moorhouse, 2021), the authors could not find any prior studies of the direct effects of HyFlex delivery on student evaluations of instructors or courses. The authors hope to begin to fill that gap with this research.

The authors examine the following research questions:

RQ1: Do course evaluations and/or instructor evaluations improve, decline, or stay the same when the delivery method changes from asynchronous online to HyFlex?

RQ2: Are course evaluations and/or instructor evaluations higher, lower, or the same in the HyFlex section in which students are allowed to attend class face-to-face compared with the HyFlex section in which students are not allowed to attend class face-to-face?

As explained later in the paper, during the first six weeks of the semester, the weekly live face-to-face sessions of Instructor Y's HyFlex class commenced later than the scheduled start time. Primarily because of these delays (especially on the first day of class, when class started 20 to 25 minutes late due to technical issues), Instructor Y expected his first HyFlex course and instructor evaluations to drop substantially from levels obtained in prior semesters teaching sections of the same class in online non-HyFlex (asynchronous) format. Instructor X expected his first HyFlex course and instructor evaluations to not differ significantly from levels obtained in the prior (non-summer) semester teaching sections of the same class in online non-HyFlex (asynchronous) format. Given prior research findings on the effects of online vs. in-person course delivery on course and/or instructor evaluations, and the fact that students registered in a HyFlex class section in which face-to-face attendance is allowed are perfectly free to attend online most or all of the time, Instructor Y expected that his first HyFlex course evaluations and instructor evaluations would not be lower but might be higher in the section in which face-to-face attendance was allowed than in the section in which face-to-face attendance was not allowed.

The authors also examined whether, on average, grades earned in HyFlex classes differed from those earned in asynchronous online versions of the same classes. The authors/instructors obtained Institutional Review Board (IRB) approval to utilize student grade information for this study. Consistent with prior research, the authors found no significant differences in grades earned between the two delivery modes. The authors chose to omit from the paper the research questions, methods and results where grades are the dependent variable because the results were consistent with prior research, and in order to keep the length of the paper within acceptable limits. Those results are available from the authors upon request.

## **Methods**

In Fall semester 2023, two of the authors each taught a different accounting business class in HyFlex format for the first time. Each had taught that class in online (asynchronous) format during Spring semester 2023 and had taught that class at least four times recently prior to 2023 at the same university. Fall 2023 was the first time either had taught any class in HyFlex format.

For one of the authors (hereafter, Instructor X), that first HyFlex class was Taxation of the Individual; for the other author (hereafter, Instructor Y), that class was Intermediate Financial Accounting II. Both HyFlex classes met “live” one day per week for 75 minutes, and asynchronously another day of the week for 75 minutes. The “live” session could be attended in person by students registered to take classes on campus, or online synchronously or asynchronously by all students in the class.

Taxation of the Individual focuses on federal and state tax laws and regulations as they pertain to both individuals and business entities. Students in the class use tax forms and software to determine the appropriate taxes in cases involving individual and business scenarios. They analyze tax strategies and their implications for personal and business decision making and financial planning. The course emphasizes professional ethics for tax practitioners. It is delivered primarily through lectures, practical instructional examples, tax simulations, preparing an actual 1040 federal tax return, and traditional assignments, homework and exams.

Intermediate Financial Accounting II covers accounting for the acquisition and disposition of property, plant and equipment, depreciation, impairments, depletion, intangible assets, current liabilities, contingencies, long-term liabilities, stockholder’ equity, investments, and revenue recognition. It is delivered primarily through lecture, Q&A, in-class work, homework, and exams.

For each of these accounting business classes, the authors compared instructor evaluations from the first semester in which the instructor taught a HyFlex class (Fall 2023) with instructor evaluations for the same class taught by the same instructor in a non-HyFlex (online asynchronous) modality in Spring 2023. The authors made the same comparison for course evaluations as well. Then, for one of the instructors, the authors compared both instructor evaluations and course evaluations for the two HyFlex sections taught simultaneously for each HyFlex course: one in which students were allowed to attend classes face-to-face, and one in which students were not allowed to attend classes face-to-face (as explained later, the data required for such a comparison for the other instructor was not available due to FERPA rules).

The authors/instructors obtained IRB approval for this study to gain access to detailed student feedback for the course and instructor evaluations.

## **Findings**

Course evaluations consisted of three questions, and instructor evaluations consisted of fourteen questions, all answered near the end of the semester (the questions asked on the course and instructor evaluations are shown in Appendix A).

Please note that because only three students were enrolled in the “Face-to-Face Attendance Allowed” section of Instructor X’s HyFlex Taxation of the Individual class in Fall 2023, and FERPA (The Family Educational Rights and Privacy Act of 1974) rules at the university did not allow

students enrolled in a section with fewer than 5 students enrolled to fill out the student evaluations of instructor or course, the data analyzed did not include the evaluations of Instructor X or of the course by students enrolled in that section of that course in Fall 2023, the first time Instructor X taught that class in HyFlex modality.

### 1. Asynchronous vs. (Combined) HyFlex Classes:

Tables 1A and 1B show the average Course and Instructor Evaluations for both Instructor X's and Instructor Y's first semester teaching their accounting business courses in HyFlex format, and the previous (non-summer) semester, teaching the same courses in asynchronous online format. Table 1A shows the results for Instructor Y's Intermediate Financial Accounting II class, while Table 1B shows the results for Instructor X's Taxation of the Individual class.

**Table 1A: Comparison of Instructor Y's Course and Instructor Evaluations between Asynchronous and HyFlex Sections**

Intermediate II Class Format	Asynchronous	Combined HyFlex	Increase (Decrease) From Asynchronous to HyFlex
Semester / Year	Spring 2023	Fall 2023	
Number of students assigned grades*	17	18	1
Number of students who filled out the evaluations	14	12	(2)
Number of Instructor Evaluation data points (14 x 14; 12 x 14)	196	168	
Number of Course Evaluation data Points (14 x 3; 12 x 3)	42	36	
Average instructor evaluation score* <sup>1</sup>	4.61	4.47	(0.14)* <sup>3</sup>
Average course evaluation score* <sup>1</sup>	4.64	4.39	(0.25)* <sup>4</sup>
Average instructor evaluation score* <sup>2</sup>	92.1%	89.3%	(2.8%)
Average course evaluation score* <sup>2</sup>	92.8%	87.8%	(5.0%)

Note:

\* Includes grades of A, B, C, D, F, W, and Incomplete (grades of WF counted as F)

\*<sup>1</sup> Maximum of 5 possible

\*<sup>2</sup> As a percentage of the maximum possible

\*<sup>3</sup> The difference in means is not statistically significant at the 5% level ( $t$ -stat = 1.75;  $p$  = 8.1%).

\*<sup>4</sup> The difference in means is not statistically significant at the 5% level ( $t$ -stat = 1.62;  $p$  = 11.1%).

**Table 1B: Comparison of Instructor X's Course and Instructor Evaluations between Asynchronous and HyFlex Sections**

Taxation of the Individual Class Format	Asynchronous	HyFlex*	Increase (Decrease) From Asynchronous to HyFlex
Semester / Year	Spring 2023	Fall 2023	
Number of students assigned grades* <sup>1</sup>	34	19	(15)
Number of students who filled out the evaluations	7	3	(4)
Number of Instructor Evaluation data points (7 x 14; 3 x 14)	98	42	
Number of Course Evaluation data Points (7 x 3; 3 x 3)	21	9	
Average instructor evaluation score* <sup>2</sup>	3.37	3.29	(0.08)* <sup>4</sup>
Average course evaluation score* <sup>2</sup>	3.90	2.89	(1.01)* <sup>5</sup>
Average instructor evaluation score* <sup>3</sup>	67.3%	65.7%	(1.6%)
Average course evaluation score* <sup>3</sup>	78.1%	57.8%	(20.3%)

Note:

\* Only includes students in the "Face-to-Face Instruction Not Allowed" section (please see text for explanation).

\*<sup>1</sup> Includes grades of A, B, C, D, F, W, and Incomplete (grades of WF counted as F).

\*<sup>2</sup> Maximum of 5 possible.

\*<sup>3</sup> As a percentage of the maximum possible.

\*<sup>4</sup> The difference in means is not statistically significant at the 5% level ( $t$ -stat = 0.36;  $p$  = 71.9%).

\*<sup>5</sup> The difference in means is statistically significant at the 1% level ( $t$ -stat = 4.01;  $p$  < 0.1%), but these results should be interpreted with a great deal of caution due to the relatively low number of data points in each of the two comparison groups (21 and 9).

### ***Instructor Evaluations***

Relative to the prior semester, when the course was taught fully online (in asynchronous format), the first time that Instructor Y taught his course in HyFlex format in Fall 2023, the average instructor evaluation score dropped from 4.61 to 4.47, a decrease of 0.14 (see Table 1A). As a percentage of the maximum possible score of 5.00, this represented a drop in the average instructor evaluation score from 92.1% to 89.3%, a drop of 2.8%, which is much less than Instructor Y expected, given the technical difficulties in course delivery noted earlier. An unpaired  $t$ -test of the difference of means between the instructor evaluations in the HyFlex class as a whole (Fall 2023) and the instructor evaluations in the Asynchronous class (Spring

2023) was conducted. The difference is not statistically significant at the 5% level ( $t$ -stat = 1.75;  $p = 8.1\%$ ). Thus, the authors conclude that the difference between Instructor Y's average instructor evaluations in the Intermediate Financial Accounting II business class delivered asynchronously and his average instructor evaluations in the same class delivered in HyFlex modality is not statistically significant at the 5% level.

Relative to the prior semester, when the course was taught fully online (in asynchronous format), the first time Instructor X taught his course in HyFlex format, the average instructor evaluation score decreased from 3.37 to 3.29, a decrease of 0.08 (as noted previously, these evaluations were only collected in the Asynchronous class and the "Face-to-Face-Attendance Not Allowed" section of the HyFlex class). As a percentage of the maximum possible score of 5.00, this represented a drop in the average instructor evaluation score from 67.3% to 65.7%, a decrease of 1.6% (see Table 1B). An unpaired  $t$ -test of the difference of means between the instructor evaluations in the HyFlex class (Fall 2023) and the instructor evaluations in the Asynchronous class (Spring 2023) was conducted. Consistent with the Instructor X's expectations, the difference is not statistically significant at the 5% level ( $t$ -stat = 0.36;  $p = 71.9\%$ ).

### **Course Evaluations**

Relative to the prior semester, when the course was taught fully online (in asynchronous format), the first time that Instructor Y taught an accounting business class in HyFlex modality, the average course evaluation score dropped from 4.64 to 4.39, a decrease of 0.25 from the previous (non-summer) semester (see Table 1A). As a percentage of the maximum possible score of 5.00, this represented a drop in the average course evaluation score from 92.8% to 87.8%, a drop of 5.0%. An unpaired  $t$ -test of the difference of means between the course evaluations in the HyFlex class as a whole (Fall 2023) and the course evaluations in the Asynchronous class (Spring 2023) was conducted. The difference is not statistically significant at the 5% level ( $t$ -stat = 1.62;  $p = 11.1\%$ ). Thus, the authors conclude that the drop in average course evaluations in the Intermediate Financial Accounting II business class from the Asynchronous class (Spring 2023) to the combined HyFlex class (Fall 2023) is not statistically significant at the 5% level.

Relative to the prior semester, when the course was taught fully online (in asynchronous format), the first time that Instructor X taught an accounting business class in HyFlex modality, the average course evaluation score dropped from 3.90 to 2.89, a decrease of 1.01 (as noted previously, these evaluations were only collected in the Asynchronous class and in the "Face-to-Face Attendance Not Allowed" section of the HyFlex class). As a percentage of the maximum possible score of 5.00, this represented a drop in the average course evaluation score from 78.1% to 57.8%, a decrease of 20.3% (see Table 1B). Because the number of data points in each section was less than 30, Welch's  $t$ -test of the difference of means between the course evaluations in this HyFlex class (Fall 2023) and the course evaluations in the Asynchronous version of the same class (Spring 2023) was conducted (assuming unequal variances between sections). The difference is statistically significant at the 0.1% level ( $t$ -stat = 4.01;  $p < 0.1\%$ ).



The authors conclude that the drop in average course evaluations in the Taxation of the Individual class from the Asynchronous class (Spring 2023) to the HyFlex class (Fall 2023) is statistically significant at the 0.1% level, but this conclusion should be interpreted with a great deal of caution because of the low number of data points in each of the two comparison groups (21 and 9).

## **2. Course and Instructor Evaluations in the two HyFlex Sections: Face-to-Face Attendance Allowed Section vs. Face-to-Face Attendance Not Allowed Section**

As mentioned earlier, each HyFlex class consisted of two sections: one in which the students were enrolled as on-campus students (so they were allowed to attend live classes face-to-face if they wished), and the other in which students were enrolled as online students only (so they were not supposed to attend live classes face-to-face). The section in which students were allowed to attend live class sessions face-to-face is referred to below as “Face-to-Face Allowed,” whereas the section in which students were not supposed to attend class sessions face-to-face is referred to below as “Face-to-Face Not Allowed.”

As noted earlier, because of FERPA rules, neither the instructor evaluations nor the course evaluations were collected in the “Face-to-Face-Attendance Allowed” section of Instructor X’s HyFlex Taxation of the Individual class. As a result, it is not possible to compare either the instructor evaluations or the course evaluations between Instructor X’s two sections of that class for the semester analyzed.

### ***Instructor Evaluations:***

Table 2 shows the average instructor evaluations assigned by students in Instructor Y’s Intermediate Financial Accounting II business class the first time he taught that course in HyFlex format (Fall 2023), broken out by the Face-to-Face Allowed vs. the Face-to-Face Not Allowed sections.

**Table 2: Comparison of Instructor Y's Instructor Evaluations between HyFlex Sections\***

Intermediate II HyFlex Class Format	Face-to-Face Allowed	Face-to- Face Not Allowed	Increase (Decrease) From Face-to-Face Allowed to Face-to-Face Not Allowed
Semester / Year	Fall 2023	Fall 2023	
Number of students assigned grades (other than I or W)	7	10	3
Number of students who filled out the instructor evaluations* <sup>1</sup>	6	6	0
Number of instructor evaluation questions	14	14	0
Number of data points	84	84	0
Average instructor evaluation score* <sup>2</sup>	4.631	4.298	(0.333)* <sup>4</sup>
Average instructor evaluation score* <sup>3</sup>	92.62%	85.96%	(6.66%)

Note:

\* These results are for the evaluations of *Instructor Y's* HyFlex class. Please note that *Instructor X's* evaluations in the Face-to-Face Allowed section of his HyFlex class are not available, so a comparison of evaluations between sections of Instructor X's HyFlex class is not possible (please see text for explanation)

\*<sup>1</sup> These numbers are equal by coincidence

\*<sup>2</sup> Maximum of 5 possible

\*<sup>3</sup> As a percentage of the maximum possible

\*<sup>4</sup> The difference in means is statistically significant at the 5% level ( $t$ -stat = 2.45;  $p$  = 1.5%)

The instructor evaluations in Instructor Y's HyFlex Intermediate Financial Accounting II business class were higher in the Face-to-Face Allowed section than in the Face-to-Face Not Allowed section. An unpaired  $t$ -test of the difference of means between the instructor evaluations in the two sections of this HyFlex accounting business class in Fall 2023 (Face-to-Face Allowed vs. Face-to-Face Not Allowed) was conducted. The difference is statistically significant at the 2% level ( $t$ -stat = 2.45;  $p$  = 1.5%). Thus, the authors conclude that Instructor Y's average instructor evaluations in the HyFlex Intermediate Financial Accounting II business class section in which students were allowed to attend class face-to-face is significantly higher than the same instructor's average instructor evaluations in the same semester's HyFlex Intermediate Financial Accounting II class section in which students were not allowed to attend class face-to-face.

### Course Evaluations

Table 3 shows the average course evaluations assigned by students in Instructor Y's class the first time he taught that course in HyFlex format (Fall 2023), broken out by the Face-to-Face Allowed vs. the Face-to-Face Not Allowed sections.

**Table 3: Comparison of Instructor Y's Course Evaluations between HyFlex Sections\***

Intermediate II HyFlex Class Format	Face-to-Face Allowed	Face-to- Face Not Allowed	Increase (Decrease) From Face-to-Face Allowed to Face-to-Face Not Allowed
Semester / Year	Fall 2023	Fall 2023	
Number of students who filled out the course evaluations* <sup>1</sup>	6	6	0
Number of course evaluation questions	3	3	0
Number of data points	18	18	0
Average course evaluation score* <sup>2</sup>	4.500	4.278	(0.222)* <sup>4</sup>
Average course evaluation score* <sup>3</sup>	90.00%	85.56%	(4.44%)

Note:

\* Please note that *Instructor X's* evaluations in the Face-to-Face Allowed section are not available, so a comparison of evaluations between sections of Instructor X's HyFlex class is not possible (please see text for explanation).

\*<sup>1</sup> These numbers are equal by coincidence.

\*<sup>2</sup> Maximum of 5 possible.

\*<sup>3</sup> As a percentage of the maximum possible.

\*<sup>4</sup> The difference in means is not statistically significant at the 5% level ( $t$ -stat = 0.83;  $p$  = 41.4%). However, this result should be interpreted with a great deal of caution because of the low number of data points in each of the two comparison groups (18 and 18).

The course evaluations in Instructor Y's HyFlex Intermediate Financial Accounting II business class were higher in the Face-to-Face Allowed section than in the Face-to-Face Not Allowed section. Because the number of data points in each section was less than 30, Welch's  $t$ -test of the difference of means between the course evaluations in the two sections of the HyFlex Intermediate Financial Accounting II business class in Fall 2023 (Face-to-Face Instruction Allowed section vs. Face-to-Face Instruction Not Allowed section) was conducted (assuming unequal variances between sections). The difference is not statistically significant at the 5% level ( $t$ -stat = 0.83;  $p$  = 41.4%). The authors conclude that Instructor Y's mean course evaluation in the HyFlex Intermediate Financial Accounting II business class section in which students were allowed to attend class face-to-face is not significantly different from the same instructor's mean course evaluation in the same semester's HyFlex Intermediate Financial Accounting II business class section in which students were not supposed to attend class face-

to-face. However, this result should be interpreted with a great deal of caution because of the low number of data points in each of the two comparison groups (18 and 18).

To summarize the findings for RQ1, the authors found no evidence that instructor evaluations change in a statistically significant manner when the delivery mode of the two accounting business classes changes from asynchronous to HyFlex. The authors found weak evidence that course evaluations declined in one of the courses studied (Taxation of the Individual) when the delivery mode changed from asynchronous to HyFlex. The authors found no evidence of a significant change in course evaluations for the other course studied (Intermediate Financial Accounting II) when the delivery mode changed from asynchronous to HyFlex.

To summarize the findings for RQ2, the authors found evidence that instructor evaluations are higher in the face-to-face attendance allowed section of the HyFlex business class studied (Intermediate Financial Accounting II) than in the face-to-face attendance not allowed section of the same HyFlex business class. The authors found no evidence that course evaluations differed between the face-to-face attendance allowed section of the HyFlex business class studied (Intermediate Financial Accounting II) and the face-to-face attendance not allowed section of the same HyFlex business class.

This findings section describes the results that two of the authors obtained the first time they taught HyFlex business classes. Notwithstanding the title of this paper, readers (of course) may obtain different results the first time they teach HyFlex business classes than those reported above by the authors.

### **Discussion: Preparing To Teach a Hyflex Business Class for the First Time**

If a business instructor has been asked to teach a HyFlex class, it is likely that they already have experience teaching face-to-face classes, online classes (either synchronous or asynchronous, or both), and perhaps hybrid classes as well. That experience will be invaluable in preparing to teach a HyFlex class, but it will not be sufficient.

The instructor will need their “live” HyFlex class sessions to take place in a classroom that has been outfitted with the equipment and software necessary to teach a HyFlex class. At the university where two of the authors taught HyFlex classes for the first time, these tools included two ceiling-mounted webcams controlled from the instructor’s podium, several ceiling-mounted microphones, a HyFlex touch panel on the podium (in addition to the control panels already in most classrooms), and typically three monitors/screens. The monitors allow the instructor as well as the students in the physical classroom to see which remote students are raising their hands or speaking in real time.

The instructor of a HyFlex class needs to consider three groups of students simultaneously: those in the physical classroom, those watching online synchronously, and those who will later watch the session recording online (asynchronously). Depending on how active the in-class discussion is, it can be helpful to have a teaching assistant in the room during the live classroom

sessions for at least two reasons. The first is to help the instructor keep track of who online wishes to speak (and the approximate order in which online students have raised their hands). The second is to potentially resolve technical issues that can come up during class. For that reason, it can be invaluable that the teaching assistant be trained in the HyFlex hardware and software.

### **Adequate Training is Critically Important**

It is imperative that instructors receive high-quality training in the use of the necessary equipment and software prior to teaching a HyFlex class. The trainer should not only understand the technical aspects of what instructors need to learn, but also have some experience and/or training in *how to teach*. Well-prepared *written materials* should be distributed *in advance* to trainees. This gives trainees the opportunity to familiarize themselves with the material ahead of time and to follow along during training without the distraction of taking notes while learning (research suggests that when people try to multitask, and one of those tasks is learning, the learning will be less effective (Poldrack, 2007)).

Prior to each live-in-the-classroom HyFlex class session, instructors must carry out up to a dozen or more steps, often in order. The written materials should cover these steps and any order in which they need to be taken. It is helpful if the materials explain what each of these steps accomplishes, rather than simply show a list of steps to take (“buttons to push”). The materials should include ways in which the instructor or teaching assistant can reach out during class for technical help if needed. It is very helpful for the written materials to cover common situations that could go wrong and how to resolve them. The department that provides the training should provide each trainee with the means to *provide feedback* on the effectiveness of the training.

According to the design framework created by Bower et al. (2015), HyFlex training should include a *hands-on component* that requires the trainee to set up the hardware and software in the HyFlex classroom prior to a class, followed by a simulated brief segment of a class period (it is common during class to answer questions from both face-to-face and online students, and to need to switch between, for example, PowerPoints, Excel, Word documents and a document camera). Their study noted benefits for faculty who had practiced with the technology in advance. This hands-on training component gives each trainee the opportunity to make technical mistakes and learn in real time how best to recover from or avoid such mistakes, in a setting where the cost of making mistakes (in terms of class time wasted) is very low. It is not terribly unlikely that something will go wrong the first time most instructors try taking these steps if they do not get this sort of hands-on training.

If a business instructor will be teaching a HyFlex class for the first time soon and any of the above elements are missing from his or her training, the authors strongly recommend that the instructor find a way to compensate for such missing elements. For example, if hands-on training is not offered, the authors encourage the instructor to *ask for* one-on-one hands-on training as outlined above.

Finally, the authors recommend that the instructor find a mentor – ideally, someone with a deep understanding of the HyFlex classroom’s hardware and software who is available when the instructor’s class meets, in the non-zero likelihood that the instructor will encounter hardware or software problems during class, especially during the first half of the term.

### **Going Live**

At the university where two of the authors taught HyFlex classes for the first time, each HyFlex class administratively consists of two sections: one labeled “hybrid,” the other labeled “asynchronous.” Students whose registration status allows them to take on-campus, face-to-face classes (i.e., they have paid any necessary fees) may enroll in either the “hybrid” or “asynchronous” section. Students who enroll in the “hybrid” section are free to attend “live” classes in person, and/or synchronously online, and/or asynchronously online. Students who enroll in the “asynchronous” section may only attend classes online (synchronously and/or asynchronously) and are not supposed to attend “live” classes in person. Students whose registration status is solely as an online student may only enroll in the “asynchronous” section. The software used for recording the live sessions is MS Teams. In order to deal with problems that might occur with recording the live sessions, one of the authors (hereafter Instructor Y) posted prerecorded lectures before each class on the course’s Brightspace/D2L/Desire2Learn website, covering the same material covered that day.

The training that two of the authors received prior to their first day teaching a HyFlex class did not include all of the features mentioned earlier (HyFlex training at their university has since improved significantly). During the first six weeks or so of the semester, Instructor Y had technical issues at the start of every week’s live session that he couldn’t resolve using the training he’d received, and the university’s technical support was invariably busy when he needed assistance. Instructor Y called his department chair, who took the 30-second walk to the classroom and, in each case, had the problem resolved within a few minutes (Instructor Y took careful notes during these sessions).

### **Challenges of HyFlex Courses**

HyFlex business courses can be demanding, as the instructor must manage the technical aspect of the online stream along with any other programs they may be using for instruction, while also being aware of student participation/questions in both the live and online environment (Educause Learning Initiative, 2020; Stephenson & Torn, 2023). Every little detail of the technology used is important to the success of the HyFlex course, as even the choice of microphone can have a significant impact on the audio quality and accuracy of subtitles (Sanchez-Pizani et al., 2022). Additional studies found that sound quality and visualization made remote participation difficult and recommended investing in better audiovisual equipment to improve communication (Boehm & Boerboom, 2023; Zehler et al., 2021). Leijon and Lundgren (2019) found that communicating with both the in-person and online students at the same time was difficult, and having to manage multiple spaces at once can lead to less

student engagement (Nelson et al., 2022). The increase in workload for the instructor can also be “overwhelming” (Boehm & Boerboom, 2023). Wong et al. (2023) analyzed 86 HyFlex publications over a ten-year period and found that technical issues were the most often reported challenge that comes with HyFlex courses. They also report other challenges, such as the lack of familiarity with HyFlex, limited interaction between students and faculty, low levels of student engagement, difficulty providing attention to both in-person and online students simultaneously, students feeling ignored, and increased workload for instructors.

### **Recommendations for HyFlex Courses**

Institutions should use high-quality technological tools and provide extensive pedagogical training for faculty (Detyna et al., 2023; Song et al., 2024). Song et al. (2024) proposed three suggestions for an ideal learning environment for HyFlex courses. “Technology infrastructure” requires that the classroom be furnished with all the necessary equipment and software to allow students to interact seamlessly and without problems. “Classroom norms” focus more on the online students and efforts to avoid misinterpreting their behavior, such as students leaving their screen to go to the restroom or looking down while taking notes. “Community building” might involve intentionally devoting time for students attending classes in person as well as online to get to know one another to facilitate communication and trust between one another.

The Columbia University Center for Teaching and Learning (2020) offers three suggestions for faculty teaching HyFlex courses. First, plan ahead. They recommend checking out the technology in the classroom in advance so the faculty member can become comfortable with the setup before the class begins. They also suggest preparing plans for each individual class in advance. Second, connect with all students. It is important to communicate with both the in-class and online students and make them feel engaged in the course material. Make resources available to everyone and encourage them to participate. Third, ask for help. Utilize teaching assistants (TAs) if they are available, and if not, ask for help from students. Teaching a HyFlex course will be tough to manage and coordinate on your own, so do not hesitate to ask for help.

### **Conclusions, Limitations and Opportunities for Future Research**

This paper provides business instructors with information about what they might expect when teaching a HyFlex class for the first time and includes suggestions on how they might maximize the likelihood of success when they do so. The paper compares student evaluations of the instructors and courses the first time two of the authors taught HyFlex accounting business classes with the outcomes when they taught the same classes in a non-HyFlex (asynchronous) delivery mode. It also compares outcomes for one of the instructors (“Instructor Y”) across the two HyFlex sections taught simultaneously that first semester. The authors are not aware of any prior studies that examine the direct effects on student evaluations of instructors or courses of changing a course’s delivery mode to HyFlex.

Results show that the instructor evaluations for Instructor Y were significantly higher in the face-to-face attendance-allowed section of his HyFlex accounting business class than in the online-attendance-only section of the same class, but show that there was no difference significant at the 5% level ( $p = 8.1\%$ ) in instructor evaluations between the HyFlex class as a whole and the non-HyFlex (asynchronous) section of the same class. In addition, there is weak evidence that course evaluations for the other instructor (Instructor X) were significantly lower in the HyFlex section of his accounting business class than in his non-HyFlex (asynchronous) section of the same class. Although the difference in means for that comparison is statistically significant at the 1% level ( $p < 0.1\%$ ), those results should be interpreted with a great deal of caution because of the relatively low number of data points in each of the two comparison groups (21 and 9). There were no other significant differences found across sections or classes in course or instructor evaluations.

Several limitations of the paper should be noted. First, the analysis of course and instructor evaluation outcomes is exploratory in nature, in that although the instructors whose data are analyzed herein offer their expectations regarding such outcomes, the authors offer no (theory-based) hypotheses. Future research might study in greater detail how student evaluations of courses and instructors of HyFlex classes compare with such evaluations of non-HyFlex classes, and how such evaluations differ between HyFlex sections (e.g., sections where face-to-face attendance is allowed vs. not allowed) to see if the results found in this paper replicate, and if so, the conditions under which they replicate.

In addition, the data reported in the tables in the paper were gathered in accounting business classes. The authors sometimes refer to such classes as accounting business classes because accounting classes are typically part of the curriculum at AACSB-accredited colleges of business (Romano, 2018). Since the authors are not aware of any prior research on the effects of HyFlex vs. non-HyFlex delivery mode on course or instructor evaluations, it is an open question as to whether the results found in this paper on that issue would be found for courses in other business disciplines (or non-business disciplines for that matter), making that a topic for future research. In addition, the mix of teaching techniques used in non-accounting business classes (for example, brainstorming or group discussions) might, in general, be different than in accounting business classes. That could lead to differences between adapting non-accounting business classes for delivery in HyFlex mode vs. adapting accounting business classes for delivery in HyFlex mode.

Another limitation is that in two of the six statistical tests conducted, the number of data points in each of the two comparison groups is particularly low (i.e., less than 30 in each cell). As a result, the outcomes of those tests need to be interpreted with a great deal of caution. Despite this limitation, the authors present those results because for those two tests (presented in Tables 1B and 3), the authors could not find any prior studies of the direct effects of HyFlex delivery on student evaluations of courses. The authors hope that future research using more data points will provide more definitive results for comparisons of course evaluations between Asynchronous and HyFlex sections of the same class for the same instructor, and between Face-



to-Face Allowed versus Face-to-Face Not Allowed sections of the same HyFlex class taught by the same instructor.

Another limitation is the relatively small number of students enrolled in the Face-to-Face Attendance Allowed section of Instructor X's HyFlex class. The absence of that limitation would have allowed the authors to test for a statistically significant difference in course and instructor evaluations between the face-to-face attendance allowed vs. not allowed section of Instructor X's HyFlex class.

Finally, the authors did not look for possible differences in outcomes in the HyFlex sections between students who attended class online mostly synchronously versus those who attended mostly asynchronously. The authors also did not look for possible differences in outcomes *within* the face-to-face attendance allowed section of the HyFlex classes (between those who attended face-to-face vs. online). If such comparisons were to yield persistent and significant differences, further research might lead to reasons for such differences.

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## Appendix A

### Appendix A Part 1: Questions Asked on Student Evaluation of Instructor\*

(Possible Responses were: Hardly Ever; Seldom; Sometimes; Frequently; or Almost Always)

1. The instructor was well prepared.
2. The instructor gave clear explanations of the course content.
3. The instructor maintained close agreement between the stated objectives of the course and what was actually taught.
4. The instructor was enthusiastic about teaching the course.
5. The instructor set high standards of achievement for students.
6. The instructor created an atmosphere in which students felt free to ask questions or express opinions.
7. The instructor was accessible to discuss course related issues, either in person, by electronic means, or by telephone.
8. The instructor's syllabus clearly stated the course requirements.
9. The instructor demonstrated a genuine interest in and concern for students.
10. The instructor's assignments helped me learn the course content.
11. The instructor's management of the classroom or online learning environment was conducive to learning.
12. The instructor provided helpful feedback on graded tests and assignments.
13. The instructor provided timely feedback on graded tests and assignments.
14. The instructor met the class as scheduled, either on campus or online.

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\* "Almost Always" was coded by the researchers as 5; "Frequently" was coded as 4, and so on. *The instructor evaluation form also allowed students to enter comments; these comments were not analyzed by the researchers or accessed for purposes of this research per the Institutional Review Board.*

### Appendix A Part 2: Questions Asked on Student Evaluation of Course\*

Possible Responses were: "Strongly Disagree"; "Disagree"; Neither Agree nor Disagree"; "Agree"; or "Strongly Agree."

1. The course was well organized.
2. The course syllabus contained clear statements of the course requirements.
3. The course syllabus contained a clear explanation of grading criteria.

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\* The Course Evaluations also asked the following questions, the responses to which were not analyzed as part of this research:

1. How does this course fit into your undergraduate or graduate program plan? (possible responses included, "learning support"; "general education core"; "major-related"; "minor-related"; or "elective".)



2. What do you consider the strong points or highlights of the course? (responses were written and open-ended).
3. What suggestions do you have for improving the course? (responses were written and open-ended).
4. Is this course required in your major? (responses were “yes” or “no”).
5. What is your expected grade in this course? (responses were “A”; “B”; “C”; “D”; “F”; or “Other”).