Flattening the Curve: How Teaching Remotely Has Affected Grades

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Introduction

By now, thanks to recent public health concerns, all of us have had experience teaching classes remotely, either by using classroom management tools such as Moodle or Google Classroom or perhaps even simply by using a combination of online conferencing applications such as Zoom, Microsoft Teams or Google Meet and old-fashioned e-mail. This paper investigates the effect this way of teaching has had on first semester grades.

Background

I teach outlining[1] – my classes and I read journal articles and outline the paragraphs together. By teaching this skill, I can easily check students' reading comprehension without having to ask them a series of questions about each individual paragraph. Students also naturally learn how writing is organized and how sentences work together in a paragraph to explain an idea. Understanding how texts are organized will help them to write thesis papers of their own. Finally, vocabulary development and grammar knowledge usually take care of themselves. By building an outline, students must learn and use the words and sentence patterns found in the texts they are working on.

Teaching this skill remotely was a challenge. In the classroom, I start by giving students a copy of the journal article being studied, project a paragraph onto the screen and then explain, "Well, the topic sentence in this paragraph is there, and the keywords are here in the main clause, so you put them here in the outline, which looks like this. Then as you read through, you see the transition signals here, here, and here that tell you that these are the supporting ideas, which go there, there and there in our outline. And of course these are the key details so you put them in those places there." All the while writing on the chalkboard. So much for the presentation and direct instruction. For guided practice,[2] I invite students to try outlining the next paragraph and encourage some of them to put their examples on the chalkboard for class discussion.

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[1] According to Missouri State University, "The outlining method is perhaps the most common form of note taking used by college students; an outline naturally organizes the information in a highly structured, logical manner, forming a skeleton of the textbook chapter or lecture subject that serves as an excellent study guide when preparing for tests." https://www.missouristate.edu/assets/busadv/p.24.pdf Retrieved August 20, 2020

[2] As we all know, of course, good pedagogic practice is based on lessons that include presentation, guided practice, independent practice, and assessment.

From this idealized vignette, you can perhaps begin to see the problem.[3]   While direct instruction is not a problem when working remotely, guided practice is. It can only be done when the students are sitting in front of you. Besides their being able to see what you are talking about, you can help them as they work, see the light of comprehension on their faces or the cloud of confusion, which alerts you to gaps in their knowledge that need filling. You can also organize students into groups so they can try the next paragraph while helping each other as you look over their shoulders to see how they are coming along.

Problem

When working remotely, distributing materials and collecting homework online can be done as "Classwork" on Google Classroom, an activity or resource added to a Moodle topic or simply as attachments sent out to students by email. So, getting the journal article into students' hands (or in front of their eyes) was not a problem.

Likewise, doing what many people think of as teaching – standing in front of students and telling them about something – can easily be done remotely. In fact, it has been for quite some time now.[4]   A modern example is Professor Herbert Gross's[5] eloquent explanations of calculus. Now, the Kahn Academy[6] and Harvard University's HarvardX[7] have offered lecture courses online. Many of these recorded lectures feature talented speakers who make the clips not only educational but also entertaining.   As Professor Gross works through a mathematics problem, not only do his explanations help you understand calculus better, but they make you feel like you can do it, too.

However, more than making students feel that they have learned something, and more than just presenting information to our students in an entertaining manner, we want our students to do something with the instruction we have given them, to practice and put to use the ideas presented[8]. In mathematics classes, students are given sets of problems to work out. Chemistry teachers, besides giving students equations to balance, have them do the real thing in the lab[9]. In my classes, I want students to make outlines from the paragraphs in the journal articles we read together. Normally, I would watch my students as they work, explain reading strategies[10] and give hints as I walk around the room, make suggestions for improving their outline, answer questions

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[3] Math teachers face the same problem when teaching blind students: Messerklinger, Josef (2003) 方程式の音読：その言語学的考察，群馬高専レビュー　第 22 号 pp. 11-16.

[4] A very early example that comes to mind is Hammurabi.

[5] For example: https://ocw.mit.edu/resources/res-18-006-calculus-revisited-single-variable-calculus-fall-2010/course-introduction/ retrieved August 7.

[6] https://www.khanacademy.org/

[7] For example: https://www.edx.org/course/fat-chance-probability-from-the-ground-up-2

[8] The discovery method (or constructivism or the Socratic method and in mathematics education, reform mathematics) are other ways of getting the job done but perhaps only with more advanced students.

[9] For example, by doing titrations in inorganic chemistry to determine the concentration and composition of substances in a solution.

[10] For example, working top down versus bottom up or finding patterns of organization.

and help students overcome problems they might have in applying the skill. I can give them feedback and help them with subskills such as identifying topics and key words and recognizing the difference between supporting ideas and supporting details before asking them to write their outlines on the chalkboard.

Solution

 To make remote learning more like a classroom, I needed a way to look over students' shoulders as they worked, and they needed a chalkboard on which they could present their ideas to the class. The first part of the problem was solved by using the "breakout room" and screen sharing functions on Zoom's video conferencing app and having students work in groups.[11] Students could work on an outline shared amongst themselves and then present their work to the class when they returned to the main meeting.[12] I could join each group to monitor progress and offer suggestions as I would in a face-to-face class. But unlike the piece of paper on their desk, I could not write on the file they were sharing, and telling them what to write, as in the vignette in the second paragraph of the introduction but not being able to point with a finger or even a cursor, was sometimes less than efficient.[13] I still needed a chalkboard.

 The other part of the solution, the chalkboard, would have to be something more tangible and more easily shared than a video conference. When teaching English for academic purposes, we work with texts and not the spoken word. As mentioned, texts can be sent to students as hard copies and any work done on the text by students can be collected, marked and returned the very old-fashioned way via the regular mail as it was done in the day of "correspondence courses" or as it is done now by email. However, that is homework and not classwork. Students working alone or in groups at their desks under the guidance of a teacher and then presenting their work on a chalkboard is the focus of a classroom.

 While considering the options, I came across the forum activity on Moodle. As Wikipedia explains, an internet forum…

> …or message board, is an online discussion site where people can hold conversations in the form of posted messages. They differ from chat rooms in that messages are often longer than one line of text, and are at least temporarily archived. Also, depending on the access level of a user or the forum set-up, a posted message might need to be approved by a moderator before it becomes publicly visible.[14]

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[11] Other possibilities not explored and perhaps a better solution might have been to use Google Docs or the document sharing functions available on Microsoft Teams.

[12] There are drawbacks, though. Opening and joining breakout rooms can be time consuming and the teacher cannot monitor the entire class to make sure they are all on task.

[13] Using online conferencing alone would be like trying to teach students how to outline by using two paper cups connected by a length of twine.

[14] https://en.wikipedia.org/wiki/Internet_forum Retrieved August 24, 2020

This seemed the perfect virtual chalkboard: a conversation in text form, messages that can be approved and made publicly visible, and an added benefit the message can be archived. Moodle would let me keep track of who was posting, how often a student posted and of course what was posted, so I had a way of assigning participation points. More importantly, I was able to give feedback by editing and commenting on outlines and providing suggestions and corrections for the whole class to see.[15] And unlike a chalkboard which gets erased after every class, we could save our work and look back at it during the course of the year.

Using the forum to teach is very much like working in the classroom except that we do not have to physically be in the same place at the same time. The hardest part was getting students to post. I found that a set of forum rules helped to explain to students how to post and evaluation guidelines gave them a reason to post[16]. Although many hesitated at first – there was no teacher looking over their shoulder encouraging them to work and then calling them to the board – before long, we were able to study outlining together.[i]

So, problem solved. I had a system that worked. I could use Moodle not just as a way to hand out, mark and return assignments and quizzes online, but also as my chalkboard. With regular online conferences on Google Meet or Zoom[17], I could get down to teaching. So, how did we do this term?

Results

The two main statistics that I first notice after figuring grades for the semester are the range of scores, to roughly estimate standard deviation, and the average scores. These two measurements are a quick way to gauge the effectiveness of the materials and instruction and are useful when planning classes and preparing materials for the next school year. Marked differences in scores this term, however, made me wonder how we did this semester compared to other years, and so I decided to go back a bit further. Table 1 shows these two statistics for the past four years.

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[15] The one downside is perhaps that students don't have to take notes by hand. See: https://www.psychological science.org/news/releases/take-notes-by-hand-for-better-long-term-comprehension.html (retrieved August 15, 2020)

[16] And I can admit here in a footnote, that my first attempt to get students to participate in a forum was for the most part a conspicuous failure but not an entirely unmitigated disaster. One class used it in a meaningful way and they did it purely on their own after I simply told them "here is a forum you can use to share vocabulary."

[17] With reluctant classes, I assign the paragraphs for outlining as homework and then give feedback during weekly video conferences. Still, I get them started by working in groups on Zoom where I can give them some guidance and then let them finish the outline on their own as homework.

Table 1   Comparison of Spring Semester Grades

	2020		2019		2018		2017	
Class	Range	Avg.	Range	Avg.	Range	Avg.	Range	Avg.
Ⅱa(4)	100/62	82	92/**27**	68.9	91/45	72	96/54	75
Ⅱa(5)	100/55	77	83/41	67	94/52	74	97/60	75
Ⅱb(1)	100/60	**83**	80/29	70	75/56	65	92/60	74
Ⅰa(2)	100/52	77	87/56	70	95/60	74	93/61	74
Ⅰb(3)	88/60	73	**100**/56	78	82/53	**64**	91/50	74
Ⅰb(7)	100/50	75	96/59	78	92/56	72	97/54	80
Avg.	98/57	78	90/45	72	88/54	70	94/57	75

To visualize first semester scores, the results were graphed using Excel, and then the graphs were overlaid with each other. Below are some examples.
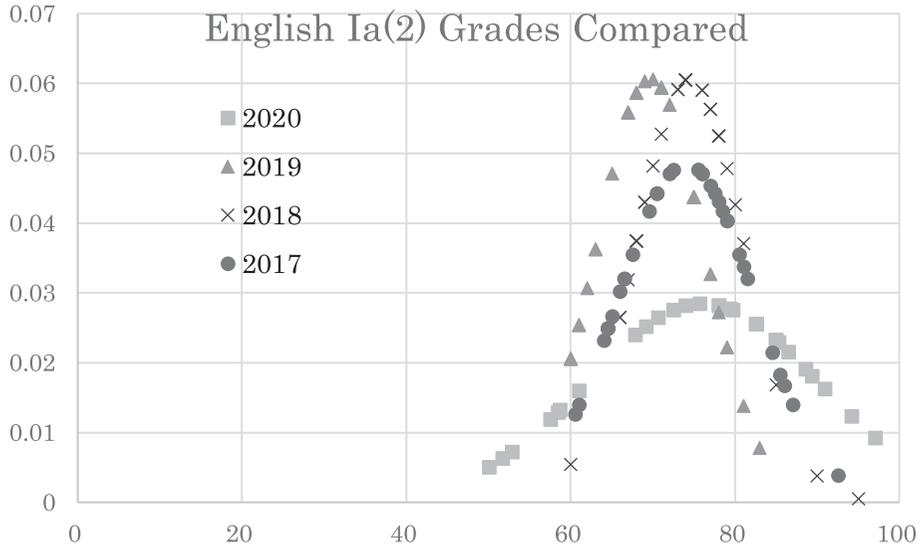
Comparison of Grade Distributions Graphed

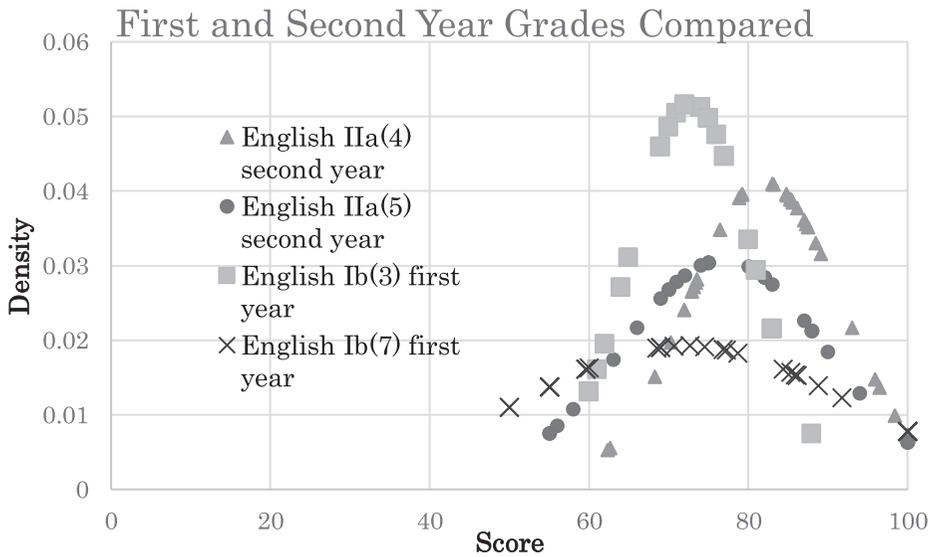Graph 1: English Ⅱb(1) scores shifted noticeably to the right this semester.
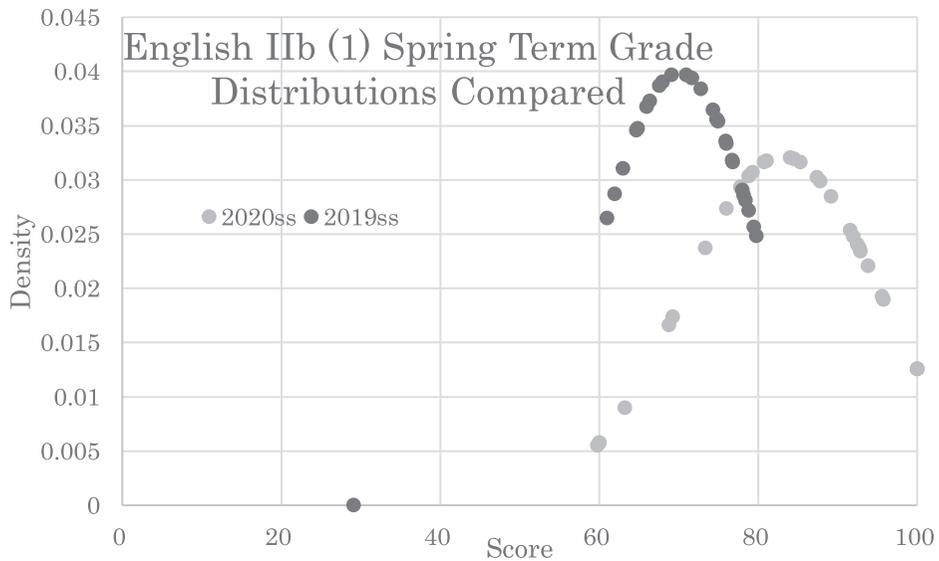
* see data table below

Graph 2: The distribution curve of English Ia(2) scores was flattened.

English Ia(2) Grades Compared

* see data table below

Graph 3: The same happened to English Ib(7) and to some extent IIa(5).

First and Second Year Grades Compared

ANOVA test	N	M	SD	ΣX^2	f-ratio	p-value
IIa(4)	30	82	9.82	211010	3.115	**0.028915**
IIa(5)	29	77	13.22	188272		
Ib(3)	31	73	7.83	155387		
Ib(7)	31	75	16.59	174933.9		

Graph 4: It looks like second year students did better than first year students.

2020 Combined Scores Compared

■ Second Year combined

● First Year combined

T-test	N	M	SD	ΣX^2	t-score	p-value
Second	92	80.71	11.86	12939.08	-3.24	**.001449**
First	88	74.68	12.93	20215.8		
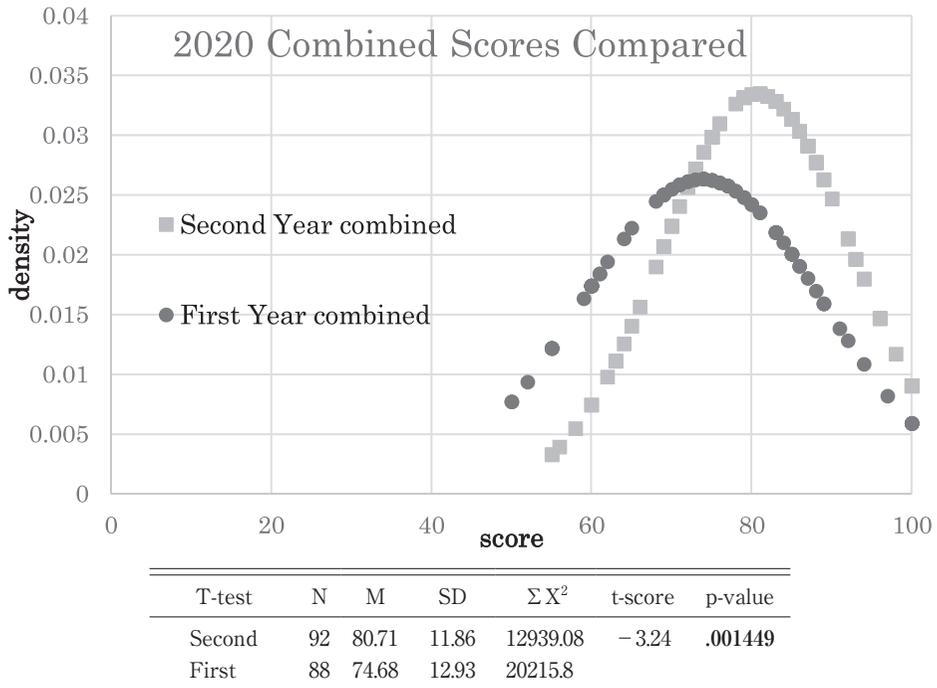
Graph 5: Interestingly, 2018 was the difficult year for Ib(3).

Ib(3) scores 2017 -2020

■ 1b(3) 2020
▲ Ib(3) 2019
✕ Ib(3) 2018
● Ib(3) 2017
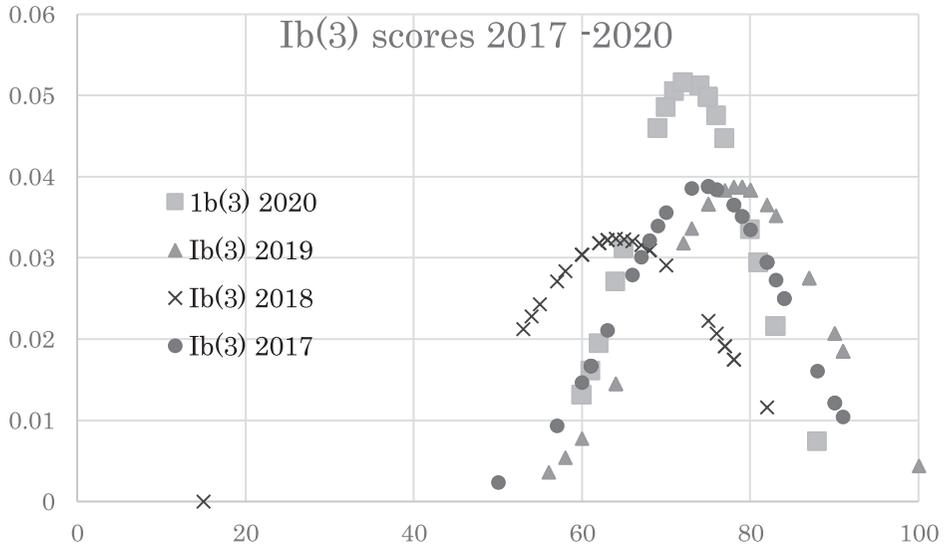
Needless to say, ANOVA tests with and without 2018 show that the year in question was indeed the odd man out.

Statistical Analysis

In the graphs selected, the differences look dramatic.[18] Not surprising, perhaps, since teaching remotely is very different from teaching classes face-to-face.[19] However, to find out if the differences are statistically significant[20] and if the two phenomenon are related, two-tailed t-tests and ANOVA tests were conducted using Microsoft's Excel 2016 data analysis tools. The results were then verified using a web-based calculator.[21] Below are tables that summarize some of the analyses.

Table 2 One-way ANOVA Data Summary of English Ⅱa(4) Scores

Ⅱa(4)	N	M	SD	ΣX^2	f-ratio	p-value
2020	31	82	9.82	211010	7.196	**0.0002**
2019	29	69	12.48	142016		
2018	32	72	12.76	172954		
2017	35	75	10.10	200292		

Table 3 One-way ANOVA Data Summary of English Ⅱb(1) Scores

Ⅱb(1)	N	M	SD	ΣX^2	f-ratio	p-value
2020	30	83	12.34	211428	22.708	**0.00001**
2019	27	72	5.90	140823.5		
2018	32	65	6.91	135124		
2017	35	73	8.68	191274		

Further analysis: 2020 v 2019 t = 1.7033 **p = .000002** (see graph above)

Table 4 One-way ANOVA Data Summary of English Ⅰa(2) Scores

Ⅰa(2)	N	M	SD	ΣX^2	f-ratio	p-value
2020	N = 29	M = 76	14.00	173149	2.550	.059
2019	N = 31	M = 70	6.57	151802		
2018	N = 30	M = 74	7.31	167912		
2017	N = 34	M = 74	8.24	188422		

Further analysis: 2020 v 2019 t = 2.27397 **p = .026685**
2020 v 2018 t = 0.54148 p = .590288
2020 v 2017 t = 0.71494 p = .477373
2019 v 2018 t = 2.00172 **p = .009447**

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[18] Just like adding contrast to a photograph can make details stand out more clearly, they can also exaggerate and distort nuances.
[19] And of course, because the dramatic graphs are more interesting.
[20] Resource consulted: Hatch, E and Lazarton A (no date) *The Research Manual*, Heinle and Heinle, Boston
[21] https://www.socscistatistics.com/ (retrieved several times between August 28 to September 30)

Table 5   One-way ANOVA Data Summary of English Ⅰb(7) Scores

Ⅰb(7)	N	M	SD	ΣX^2	f-ratio	p-value
2020	30	75	16.59	174933.9	2.319	**0.0789**
2019	29	77	10.15	177921		
2018	30	72	10.56	160055		
2017	34	80	10.67	220396		

Further analysis: 2020 v 2019 t=2.010635 p=.390764

2019 v 2018 t=2.00265 p=.050461

2018 v 2017 t=1.99962 **p=.00629**

What follows is a brief discussion of the results.

Discussion

A quick glance at Table 1 shows that no student did worse in 2020 than the lowest-scoring student in other years, and quite a few students did remarkably well. In fact, nearly every class had at least one student scoring a full 100 points.[22] Average scores were at least as high if not higher than in years past. This is particularly noticeable in English Ⅱa(4) where the class average increased by more than 13 points. In English Ⅱb(1) the class average increased by about 13 points and 3 students scored full marks. On the other hand, while average scores improved overall, English Ⅰb(3) and Ⅰb(7) did not improve average scores. Nonetheless, 5 students in Ⅰb(7) scored full marks, and in the weakest class, Ⅰb(3), no student failed.

The graphs show that in many cases scores shifted to the right and distributions curves flattened. The shift to the right can be can be seen in Graph 1 which shows the grade distribution graph for English Ⅱb(1). A flatter grade distribution can be seen when comparing the grade distribution curves for the past four years for English Ⅰa(2) in Graph 2. The comparison of first and second year scores in Graphs 3 and 4 also clearly shows this flattening of curves. Looking through the other data tables, we can see that for most classes, standard deviations tended to be greater this term than in the past. That is, scores tended to spread out more and there were greater differences among students resulting in the flatter curves. In some classes, Ⅱb(1) for example, the differences were between students who passed and those who passed with high scores. In other classes, Ⅰb(7) for example, the differences were stark – besides the 5 students who scored full marks, 6 received scores below the 60 point cut off for passing.

Yet, while some curves shifted to the right and others were flattened, this was not always the case. Although scores for second-year students tended to shift to the right and score for first-year students tended to spread out more, as seen in the Graph 4,

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[22] And actually, many of these students scored over 100 points because not only did they do the regular class-work, but they also did every extra-credit assignment.

some classes did not follow this trend. For example, in Graph 3 and the accompanying data table we can see that English Ib(3) had a relatively small standard deviation, 7.83 with scores more tightly grouped around the 73 point average; only 28 points separates the highest scoring student from the lowest scoring student. Further investigation, shown in Graph 5, suggests that 2020 was more like other years and that 2018 was most unlike the others. ANOVA tests confirm this observation. Therefore, the variation in results makes it difficult to say that the scores this term were necessarily different from the scores of other terms.

On the other hand, scores for English IIb(1) and IIa(4) in the spring semester of 2020 really were different from previous terms. Not only do the graphs show this, but also the data analyses, summarized in Tables 2 and 3, reveal significant differences in scores between these years with 2020 being the obvious outlier. We can say there was a significant improvement in scores for these classes this term. For English Ia(2), however, the significance is less clear. A summary of the data analysis, Table 4, shows that after further analysis – t-tests performed between other years – the difference actually lies in the 2019 scores when scores were lower. So, when comparing students in Ia(2) 2020 with students in previous years, while the graph looks quite dramatic, the numbers tell us that despite the flatter curve for 2020, all grade distributions fall within the same general area of the graph as most other years. The differences among the years is not statistically significant and can possibly be attributed to other factors besides the difference in the medium used for teaching in 2020. Likewise, further analysis of the results of an ANOVA test of scores for English Ib(7) summarized in Table 5 reveals that there is a significant difference in average scores between 2017 and 2018 but not between 2020 and 2019 and that we can be 90% confident of a difference between 2019 and 2018 grades. There must have been other differences besides remote teaching.

Other Objective Factors

We might object to any conclusions based on this analysis for obvious reasons. For one, we are comparing different students from different school years and to make these comparisons must assume that they are all about the same in terms of ability[23], motivation and readiness to learn. For another, we must assume that the teaching modes – remote vs in class – really are different.[24] Finally, the comparison assumes that the materials were the same, which they most definitely were not. In some cases, the difference between texts used one year and texts used in another were very different. Below is a table that shows average text difficulty for each class by year.

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[23] But since students are assigned to classes alphabetically and not by English proficiency, they should be roughly comparable.

[24] Perhaps online instruction allowed for better, more appropriate and individualized feedback. Teaching groups of students often means teaching to the lowest common denominator in the class.

Table 6   Average Grade Level / Flesch-Kinkaid Reading Ease Scores

	2020	2019	2018	2017
IIa(4)	**20/12**	11/41	11/42	10/52
IIa(5)	**20/12**	12/38	12/44	10/52
IIb(1)	13/37	11/47	13/39	9/50
Ia(2)	17/28	10/52	10/47	13/38
Ib(3)	15/31	9/52	11/42	**8/65**
Ib(7)	15/31	10/53	11/52	**8/65**

Scores rounded to nearest whole number. Reading scores for 2017 2018 and 2019 based on exam texts.

Fairly strong correlations were found between reading grade level and semester grades ($r = 0.724/r = -0.754$) in the years *prior to* 2020. As reading ease increased so too did scores, and as the grade level of the reading material increased, and therefore the assumed difficulty of the reading material, grades tended to be lower. Confusingly, however, when results from 2020 are added to the mix, the correlation disappears ($r = -0.125$) with reading ease and shows a weak ($r = 0.329$) *positive* correlation with grade level. This result is remarkable since it suggests that despite the greater reading difficulty, students on average did better in 2020.

Subjective factors

So, not only do the readability scores not help to explain the shift of scores to the right this term, they cannot help explain the flatter distribution curves. Since the material is the same for pairs of classes such as IIa(4) / II(5) and Ib(3) / Ib(7), the broader standard deviations must be a result of greater differences among students rather than a result in differences in materials or treatment. Several possibilities come to mind. As Black, Ferdig and Thompson have noted, "students need to be motivated, organized, and supported."[25]   They also need to be self-disciplined, know how to learn, and in the case of remote learning via the internet, know how to use a computer. We can gauge some of these factors by asking the students themselves. To get an idea of their level of motivation, students were asked how they feel about English. They were also asked to judge how well or comfortable they were with using the internet and computers. Below is a table that summarizes the results of the questionnaire in very broad terms.

[25] Black E, Ferdig R, Thompson LA. K-12 Virtual Schooling, COVID-19, and Student Success. JAMA Pediatr. Published online August 11, 2020. doi:10.1001/jamapediatrics.2020.3800

Class Survey Results

	IIa(4)	IIa(5)	IIb(1)	Ia(2)	Ib(3)	Ib(7)
computer use*	58% /26%	63% /19%	50% /42%	30% /19%	41% /32%	62% /19%
motivation**	+3/−1	+4/−3	+3/−1	+4/0	+6/−1	+3/−2

 * percentage of students with more than three years of experience using Microsoft WORD/ confident using a computer.
 ** plus and minus numbers refer to the number of students who like/hate English.

Students answered the questionnaire anonymously, so correlations with grades cannot be made. Nonetheless, the results suggest that some students may have had difficulty with studying remotely because of a lack of computer skills[26] and that others did not do the work because of a lack of motivation.[27] On the other hand, without having to refer to survey results, we can be sure that the students whose semester grade was 100 points were very motivated[28]. Many of these students did extra work and put in extra effort; they seem to have thrived on the mode of instruction.[29]

Other affective factors that might account for the differences in performance this semester were not investigated. Besides differences in their ability to use a computer, word processing software and the internet and differences in their level of motivation, students' level of inhibition and self-discipline were not assessed. For some students, these may have been important factors. Although working alone may have benefited less aggressive students, it may have penalized the more passive student. Passive students may also have been more easily overlooked and not been given the encouragement they needed. Similarly, students lacking time-management skills may have been penalized by the mode of instruction because they were tempted by too many distractions at home and online and thus failed to log onto class for an important Zoom meeting. Often a gently worded email came too late or was lost in the clutter of other messages. Furthermore, in years past, students could rely on paper tests, both a mid-term and a term-end exam, to determine their grade, and class participation points were largely a matter of showing up. Homework counted less towards their final grade. For some students, it may have been difficult to keep to a work schedule on their own and finish assignments on time.[30]

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[26] Some students may, of course, have over-estimated their skills.
[27] Perhaps a passing grade is all they were interested in. Such students most likely need the teacher to push them along.
[28] Some perhaps because they are interested in English, others perhaps because they want a good GPA.
[29] Perhaps because they were not held back by the classroom environment, they did not have to wait for a teacher who was busy helping slower students keep up with the class. Or perhaps they were not influenced by peer pressure to conform to the average. Yet again, perhaps for shy or less aggressive students, it may simply have been easier for them to write a message on the forum than to speak up in class.
[30] Dropout rates for distance learning courses has always been a concern. See, for example, https://files.eric. ed.gov/fulltext/ED504556.pdf (retrieved October 13, 2020)

Conclusion

Certainly, most teachers and students want to get back to the regular classroom and for good reason. Handing students a copy of your PowerPoint presentation and then explaining it to them while they are there in front of you is more efficient and gives you the feeling that you have done some teaching. Furthermore, although grade curves shifted to the right and levels of achievement were higher than ever despite the more difficult reading material, the flatter grade curves came at the expense of a number of students falling off the left tail[31].

Still, it would be a shame not to continue using these new ways of teaching. For some students, studying remotely was a more effective way of learning, and the numbers this term show it. From a teacher's perspective, working with motivated and self-disciplined students made it feel that the lessons were more successful and that the students were working exceptionally hard. In my classes, for example, I could give detailed feedback to students that was tailored to their individual needs rather than making blanket observations and comments about the class's performance. And because many of the mundane parts of the lesson were automated – distributing materials, giving and grading short quizzes, taking attendance, etc. – we could get far more work done. In face-to-face classes, we usually could finish only one paragraph per class session for perhaps eight outlines per term. Using Moodle and the online forum, all classes tackled at least 12 outlines, and students in motivated classes like Ⅱb(1) up to 16. So, all in all, it seems students did pretty well this term.

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[31] But as the analyses show, the poor scoring students we have every year.

Endnotes

[i] A screenshot from an outlining forum. We have worked out the basic structure of the outline, but are still trying to get the ideas to fit together.
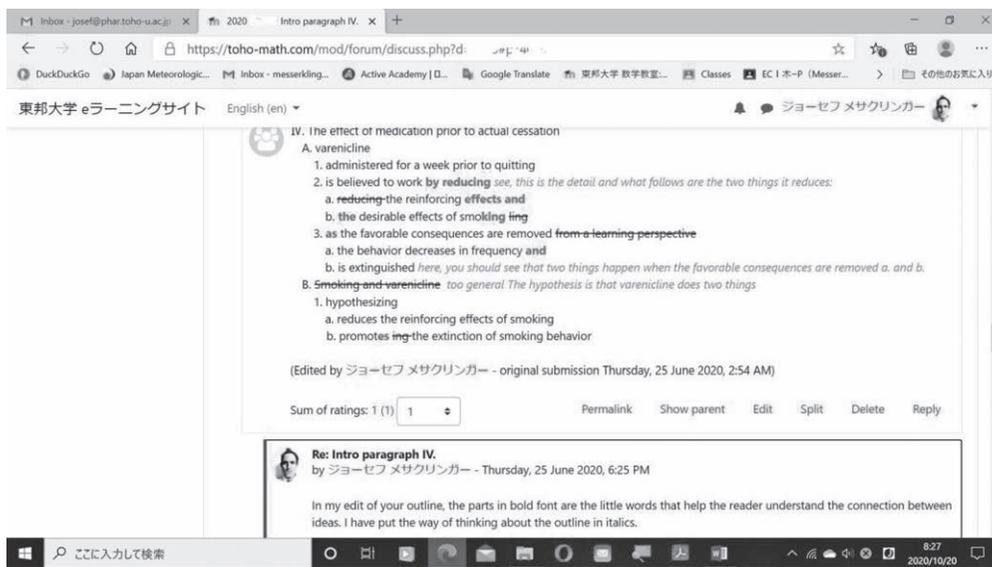
The paragraph is reproduced below for reference. It is the penultimate paragraph in the introduction.

> Though post-quit cessation mechanisms are certainly important, it is also important to examine the effects of medication prior to actual cessation. This is especially important for an agent like varenicline that is typically administered for a week prior to quitting and is believed to work, in part, by reducing the reinforcing or desirable effects of smoking. From a learning perspective, when the favorable consequences are removed, the behavior decreases in frequency, or is extinguished. In the case of smoking and varenicline, we follow the preclinical work of Coe and Rollema in hypothesizing that varenicline reduces the reinforcing effects of smoking, thereby promoting the extinction of smoking behavior.
> （108 words ／ 4 sentences Flesch-Kincaid reading ease 18.8% ／ grade level 17.3）

Another screenshot from the forum showing the last section of a student's post. By this point in the thread, we have worked out what key words to include and are refining the structure of the outline.

2. b. measured 3 months after the TQD *And shouldn't this be B.2.?*
C. the effects of role of sex *this can be a part of B. So, C. should be B.3.*
   1. a. sex moderates the behavioral pharmacology *and this can be combined with C.*
      a. (1) nicotine *so these can stay the same*
      b. (2) smoking
      c. (3) cessation
(Edited by ジョーセフ メサクリンガー - original submission Friday, 17 July 2020, 4:17 AM)

Sum of ratings: 1 (1) 1 ＋

Permalink   Show parent   Edit   Split   Delete   Reply

Re: One more and we are done with the Introduction
by ジョーセフ メサクリンガー - Friday, 17 July 2020, 1:48 PM

OK, but the structure is a little odd, some wording could be changed to help it read more easily, and somethings are in the wrong place. But otherwise, I think you get the idea of the paragraph pretty well.

The paragraph the class was working on was the final paragraph of the introduction of the article we read. It is reproduced below for reference:

> This paper presents data from a randomized clinical trial designed to test whether extending the duration of pre-quit varenicline from one week (standard run-in) to four weeks (extended run-in) would lead to greater pre-quit reductions in smoking rate, expired-air breath CO, and favorable ratings of cigarette taste and smoking satisfaction. We also conducted exploratory analyses of smoking abstinence measured 3 months after the target quit date. In addition, given that participant sex often moderates the behavioral pharmacology of nicotine and smoking, as well as cessation, we explored the moderating role of sex in the effects of pre-quit varenicline duration.
> (99 words / 3 sentences Flesch-Kincaid reading ease 11.8 / grade level 19.8)

It took most classes anywhere from four tries to nearly 20 to get an outline that we all were satisfied with and sometimes with a difficult paragraph or for weaker classes, I simply supplied them with a model outline. Far from ideal, but on the other hand, students did much more using this method of instruction than we ever had while in the classroom. In previous years, we might do eight outlines together in class. Most classes this term did nearly twice that number and some students even asked if there were any more paragraphs to outline!