

STA 216 01
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 16/24 (67% high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.2	3.6
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.6
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	16	19%	19%	25%	19%	19%		3.0	3.4
The course content was:	16	19%	12%	62%	6%			3.2	3.5
The instructor's contribution to the course was:	16	25%	19%	38%	6%	6%	6%	3.3	3.8
The instructor's effectiveness in teaching the subject matter was:	16	25%	6%	38%	19%	6%	6%	3.0	3.5

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	16		12%	25%	31%	31%			4.1
The intellectual challenge presented was:	16	19%	19%	25%	31%	6%			5.0
The amount of effort you put into this course was:	16	6%	38%	25%	12%	12%		6%	5.2
The amount of effort to succeed in this course was:	16	19%	19%	38%	19%		6%		5.2
Your involvement in course (doing assignments, attending classes, etc.) was:	16	12%	19%	44%	6%	12%		6%	5.1

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 4.5 Hours per credit: 1.5 (N=16)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
12%	19%	38%	25%	6%							

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 3.2 Hours per credit: 1.1 (N=16)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
12%	44%	31%	12%								

What grade do you expect in this course?

Class median: 3.0 (N=16)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
19%	6%	19%	19%	6%	12%	12%		6%						

In regard to your academic program, is this course best described as:

(N=16)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
38%		6%	38%	12%	6%

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	16	25%	25%	25%	25%			3.5	4
Explanations by instructor were:	16	25%	25%	25%	25%			3.5	8
Instructor's ability to present alternative explanations when needed was:	16	31%	19%	19%	25%	6%		3.5	10
Instructor's use of examples and illustrations was:	16	31%	12%	44%	12%			3.4	16
Quality of questions or problems raised by the instructor was:	16	25%	31%	25%	19%			3.7	7
Student confidence in instructor's knowledge was:	16	38%	31%	19%	12%			4.1	3
Instructor's enthusiasm was:	16	38%	25%	25%	12%			4.0	5
Encouragement given students to express themselves was:	15	33%	20%	33%	13%			3.7	14
Answers to student questions were:	16	25%	31%	31%	6%	6%		3.7	9
Availability of extra help when needed was:	16	38%	38%	19%	6%			4.2	1
Use of class time was:	16	25%	25%	25%	25%			3.5	12
Instructor's interest in whether students learned was:	16	31%	12%	38%	19%			3.3	17
Amount you learned in the course was:	16	25%	19%	25%	12%	12%	6%	3.2	15
Relevance and usefulness of course content were:	16	31%	19%	38%	6%	6%		3.5	13
Evaluative and grading techniques (tests, papers, projects, etc.) were:	16	31%	19%	31%	12%	6%		3.5	11
Reasonableness of assigned work was:	15	33%	27%	27%	13%			3.9	2
Clarity of student responsibilities and requirements was:	16	31%	25%	31%	12%			3.8	6

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STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

2. the examples were extremely dry, uninteresting. application of readings was difficult and unclear
4. Yes it was a nice advancement from the content of STA215 and made sense once we worked on the TAPs.
5. I learned a lot in this class.
7. Yes, I learned a lot from the book and course work. The topics were broken down well and made easy to understand.
10. It would have been more stimulating if we didn't do the same thing every day.
11. This class was very challenging even with the help of a tutor.
12. Ya it stretched my thinking and further my knowledge of stats
13. Yes, some of the problems on the TAP's were challenging and requires to apply information on different ways and helped learn
14. I am retaking this course after not doing well the first time and I have a much better understanding of the topics this time around. Before I felt confused and lost but this time I feel very confident in what I've learned. What helped me do well was the TBL format of the class which created much more student participation and student led discussion.
15. my thinking was stretched a lot in this class because it was the highest level of statistics I've taken so far

What aspects of this class contributed most to your learning?

2. i had to teach myself and my classmates everything. the instructor did little to nothing to contribute to my learning, other than grading assignments, which even he shifted off to assistants.
3. The fact that it was team-based learning so I was able to learn from others while being able to teach them too.
4. The TAPs and explanations when going over the answers to them
5. When Bradford actually explained things. He makes things easier to understand than the book.
7. Reading the book.
9. Having other group members to help each other learn the material.
10. Having multiple documents to refer back to.
11. My tutor.
12. The team based learning, having other around me for immediate questions and clarification.
13. Working as a group and getting others contribution to the TAPs
14. The TBL class format.
15. it was somewhat helpful to have my peers try to explain the material to me and working in groups meant that I had my peers relying on me to understand the course content which helped to hold me accountable for knowing it

What aspects of this class detracted from your learning?

1. Different paces of groups made the class feel disjoint
2. The ENTIRE TBL model of the class needs to be thrown out. Teach it like a regular class and like a regular professor. the TBL model is so bad. I had to teach myself everything. I am so disappointed with the amount of work I had to do outside of the class to understand the material, or even complete the homework. The professor was not helpful in teaching the subject.
4. SAS being a pain to download. The IT Department needs to find a way to make it downloadable like SPSS so I don't have to be on campus to download it.
5. I HATE TBL. Bradford is such a good professor and reading and learning from the book is so confusing. I wish he would just lecture like a normal class. He knows so much and can explain it so well, and its going to waste with TBL.
7. The team names, the constant group work, the stop signs and flash cards.
9. Reverse classroom. This class was my first Team Based Learning class and I did not like it. The professor occasionally gave a very brief explanation of the subject matter, but it was mostly up to the students to teach themselves the course work. When I signed up for this class, there were no other options available, only reverse classroom.
10. The amount of group work and repetitive daily activities.
11. Working in a group setting.
12. Not having a TAP for each member made it harder to get the group together.

13. Lack of teacher explanation/lecture
14. For groups that completed activities quickly, there was a lot of down time which could have been utilized with other optional activities.
15. I didn't like and it didn't help that the style of teaching used was not what I was used to; I feel that I do better if the professor lectures more instead of giving the students so much freedom in that department; it felt like the students were trying to teach themselves and each other the course material without much direction from the professor

What suggestions do you have for improving the class?

1. more structured lecturing integrated into the group work.
2. throw out TBL.
4. Suggest to the IT Department for SAS to be downloadable in other easier ways. Otherwise, keep doing what you're doing!
5. Get rid of TBL. (Please) Also when students have questions and they are not at the stop sign yet, please just answer them because it makes more sense if I understand that question to answer the rest.
6. Not TBL.
7. Take out the juvenile stuff. It's a college course and I don't think students of this age need group names or flash cards to show answers. I do think working in groups was very beneficial, but I would have liked more individual work.
9. Allow options for this class to be lecture based, not reverse classroom.
10. Try to change things up so we don't get into a big routine.
11. Not making this course a team based learning. The idea is nice but when you have people who are more advanced than others it's kind of hard to keep up and is a little frustrating because not every one works well in groups, some people work better alone or when there is a professor lecturing.
12. Give TAP to each member and discuss the previous test most missed questions, same as the homework.
13. Small lecture at the beginning of a new chapter would be helpful
15. it would be helpful if the professor devoted more time to explaining course material instead of leaving it primarily as the students' responsibility

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific "things" the instructor did to help make the TBL experience beneficial for you.

1. the TAPs were good ways to apply the material.
2. literally nothing. stop pushing TBL. its terrible. None of my classmates were a fan of the model. I did not meet a single classmate through the semester that actually liked the model.
4. Explain questions if there was discrepancy between groups for the answer.
5. TBL was good because we got to bounce ideas off of each other and talk to each other to get to the right answers. Something you did to improve TBL was putting what questions to look back on for the homework. Your explanations were also helpful.
6. Answer questions when needed and make suggestions during TAPs.
7. He gave us work packets that were easy to follow and helped with understanding concepts.
10. Provided videos
11. Provided videos and enough material on the packets that we did in class to do the hw.
12. Come around to answer questions for the group and listening to see if there was questions.
13. Going over the questions on the TAPs and why questions were right was helpful
14. Because the instructor spent most of class time going around to the groups and assisting them with the activities as needed, it was easier to ask questions or get clarification than it would be in a full lecture style class.
15. the use of the TBL format alone was at least somewhat helpful because it helped to hold the students more accountable for knowing and understanding the course material

Identify one or two specific "things" the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Provide answer keys for the TAPs and tests and quizzes for better studying.
2. Write some lectures. I had to learn everything from my classmates or from the book.
4. N/A
5. Something that did not help the TBL was if you had a group that didn't do the reading (like mine). I had to then slow down and explain why I chose every answer and had no one to bounce ideas off of. In this way I had to be their professor and not Bradford. If there is a way to make sure the students actually do the readings or a way to quiz for more thorough reading, please do that. Also if there is a question a student has, don't say we will go over it at the stop sign, just answer it right there. It stinks when you can't answer it and then next couple questions are off of that question.
7. I noticed he was open to people asking questions, but when he didn't know the answer to a question he sometimes gave a vague response instead of looking for a full answer and getting back to us students.
8. If there were a way to have better and more standardized notes to take home rather than just examples from the TBL activities.
9. One thing that would have greatly helped my learning is if each team member had their own packet of activities we were working on. There were 5 members in each team, but only 3 packets of work that we had to do. This means you had to always look over someones shoulder to see the questions and help your team come up with an answer. Most of the time these packets were not available online to print for yourself until after your team has worked on it. I feel that I would have done much better in this course if I had my own packet for each learning module from the beginning.

10. Mix up the day to day learning styles
11. Lecture a little more.
12. TAP for everyone
13. Lecture or teach more
15. one thing would have been to devote at least a little more time at the end of class to answering questions from students and explaining course content a little better than it appeared in the textbook

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. Used the group members as resources when I didn't understand something or needed clarification.
2. No thanks.
3. I embraced learning off of my groupmates while also doing the outside class work.
4. Come to class prepared
5. Reading from the book definitely helps. Communicating with your group also helps. Starting the homework early also helps. Going to the Stats Help Center also helps.
6. I had to go to tutoring and the stats center just so I could get a grasp on what we were learning because I can't learn from TBL.
8. Getting involved with my group.
9. Meet up with team members to help learn the material.
10. Referred to the textbook
11. I got a tutor.
12. Listen to each group member and see what they thought about the questions.
13. Pay attention and contribute while doing a TAP with my group
14. Working with a group of other people meant I was explaining myself and my work to my other group members often which helped reinforce the content I learned and also helped me discover any flaws in my understanding.
15. it felt like I was constantly trying to review the course material outside of class and I always tried to study more when I knew there was going to be an exam coming up

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Annotate the TAPs more so I could explain why I chose the answers I did.
2. I worked hard. this is a review of the class, not of myself.
4. Remember how to find Mean Square and Sum of Squares to fill in the tables of the TAPs.
5. Starting the homework earlier than I did. Going to office hours to ask questions
10. Went to office hours more
11. Read over the material multiple times until I understood. Make practice problems for myself to see if I really understand the material.
12. Make sure that everyone understands the questions before we move on
13. Read the book more often and attend class more often
15. I could have tried to review the material more outside of class or before the reading tests and I could have tried to reach out to my group more even though they didn't always answer when I did try and were more than willing to help each other

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked “Why?”

1. I would say I depends on the student. If he/she is good at teaching him/her self, then TBL can be a good fit.
2. I would calmly explain to them that TBL is a terrible structure and implore them to switch immediately. All of the effort is placed on the student. The professor will likely do nothing for the student - its almost as if the only thing the professor needs to do is to grade papers. If I really wanted to pay thousands of dollars to learn statistics, I'd just pay a tutor myself, the professor has no incentive to do any instruction in a TBL model. I cannot stress how garbage the model is.
3. It definitely depends on their learning type. If they like group collaboration definitely but if not then no.
4. I'd suggest taking the TBL-section since it went smoothly once everyone got in the swing of things. The class periods flew by and we were prepared for the tests by working on the TAPs and collaborating with our teams.
5. I would say do not take the TBL section. You are required to read a lot and if your group doesn't keep up with the reading you end up having to teach them, which is fine occasionally, but every day because they never do the reading is not okay. That should be the professor's job.
6. I would not recommend it if they do not learn from group work. I'd suggest a non-TBL section. Otherwise, I'd tell them to be prepared for fast-paced group work, long homework assignments, and reading quizzes that were not beneficial to my understanding.
7. I personally like working alone rather than in a group all the time. I would not recommend TBL to someone unless I knew they could really excel and help others excel.

8. I would recommend the TBL section because being with a group helps you stay accountable and gives you others in the class that can help if you're struggling with anything.
9. I would recommend they take a non-TBL section of the course. It was much more difficult to teach myself the material as opposed to a professor teaching it. Reading the textbook day after day is not ideal for me when it comes to learning the material. I expect to go to class and learn the material and do homework as review, not go to class for review after I have already attempted to teach myself the material. I would definitely NOT recommend a TBL section of this course.
10. For my learning style I am not a fan of TBL. I am a very independent learner and it's not that I don't like group work it's that I learn and understand concepts better when I am doing it on my own. A group setting just confuses me more. I understand the idea and how it encourages group collaboration but I do not like how it's all we do everyday. This class needs a better balance of group work and other types of learning styles
11. A non-tbl section because if the friend is anything like me and works better when a professor is lecturing and goes in depth when explaining the material, tbl would not be the course for them.
12. Yes I would recommend it because it helps to learn from others around you and hear what they have to say which will help you understand the content better.
13. It depends on my friends preference for learning, if they need a lecture and be taught I would recommend switching, but if they like learning on their own and collaborating with other students I would tell them to stay.
14. Yes. Definitely take the TBL section. I've taken this class twice, once with a normal lecture format and the other with the TBL format and the TBL format is SO much better. It is much more engaging for students which is a better learning environment.
15. I would suggest that my friend switch to a non-TBL section because for a student who finds the traditional lecture style more useful or does not particularly enjoy working in groups the way the TBL technique requires it can be a big and difficult adjustment to make and might take away more than add to the learning experience the student expects to get from the class; this is in addition to not knowing the kind of students you are going to be working with because there's always a chance that group partners will not get along or that personalities will clash

STA 216 03
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 18/22 (82% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.8	4.2
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.0
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	18	28%	44%	11%	17%			4.0	4.5
The course content was:	18	28%	33%	33%	6%			3.8	4.2
The instructor's contribution to the course was:	18	28%	39%	17%	11%	6%		3.9	4.4
The instructor's effectiveness in teaching the subject matter was:	18	22%	17%	44%		11%	6%	3.2	3.8

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Do you expect your grade in this course to be:	18		17%	11%	56%	6%	11%		4.1
The intellectual challenge presented was:	18	22%	28%	33%	17%				5.5
The amount of effort you put into this course was:	18	22%	22%	44%	6%	6%			5.4
The amount of effort to succeed in this course was:	18	22%	33%	28%	11%	6%			5.7
Your involvement in course (doing assignments, attending classes, etc.) was:	18	22%	28%	39%	11%				5.5

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 5.1 Hours per credit: 1.7 (N=18)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
		61%	28%	11%							

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 4.6 Hours per credit: 1.5 (N=18)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	17%	61%	6%	17%							

What grade do you expect in this course?

Class median: 3.3 (N=18)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
6%	28%	28%	28%		6%		6%							

In regard to your academic program, is this course best described as:

(N=18)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
50%	6%	6%	22%	17%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	18	39%	33%	11%	11%	6%		4.2	3
Explanations by instructor were:	18	17%	33%	28%	6%	6%	11%	3.5	16
Instructor's ability to present alternative explanations when needed was:	18	17%	44%	17%	17%	6%		3.8	13
Instructor's use of examples and illustrations was:	18	39%	22%	22%	11%	6%		4.0	12
Quality of questions or problems raised by the instructor was:	18	39%	22%	33%	6%			4.0	10
Student confidence in instructor's knowledge was:	18	56%	39%		6%			4.6	4
Instructor's enthusiasm was:	18	61%	28%		11%			4.7	2
Encouragement given students to express themselves was:	18	50%	6%	39%	6%			4.5	5
Answers to student questions were:	18	17%	39%	22%	17%	6%		3.6	17
Availability of extra help when needed was:	18	33%	28%	33%	6%			3.9	15
Use of class time was:	18	44%	22%	22%	11%			4.2	6
Instructor's interest in whether students learned was:	18	39%	39%	11%	6%	6%		4.2	9
Amount you learned in the course was:	18	17%	44%	28%	6%	6%		3.8	14
Relevance and usefulness of course content were:	18	39%	39%	17%		6%		4.2	7
Evaluative and grading techniques (tests, papers, projects, etc.) were:	18	33%	28%	17%	17%	6%		3.9	11
Reasonableness of assigned work was:	17	35%	35%	24%		6%		4.1	8
Clarity of student responsibilities and requirements was:	18	50%	22%	17%	11%			4.5	1

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Instructor Evaluated: **Bradford Dykes-Assist Prof**

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Evaluation Form: A3

Responses: 18/22 (82% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Yes, I didn't expect the amount of SAS coding, going into the course, but I understand that it is necessary to progress in the subject. Thinking about how to represent the information we have with SAS code definitely improved my understanding of the concepts we dealt with, as well as the reasoning behind the code we used.
2. It was intellectually stimulating, but the concepts were very hard to understand.
3. It was a good extension of STA 215 and showed the applicability of statistics.
4. Yes, it was a very difficult class that required me to think and study in a different way.
5. Yes, I needed to read and pay attention a lot to keep myself up with everyone.
6. The content of the course is applicable and relevant.
7. It stretched my thinking in relation to data and how it can be presented. Looking at what best fits a model is interesting.
8. This class was interesting because the TBL style was very useful.
9. This statistics course delves into the language of statistics more than a previous class very similar to this one. Although the content between the two courses was relatively similar, understanding the language being used was the most difficult part of the course.
10. Yes, because it was difficult to try to learn the material without a traditional lecture.
11. Yes. The group assignments in class allowed for great problem solving and evaluation of the content that one knows.
12. This class had many new concepts, as well as previously learned concepts, that were presented in a variety of ways. It wasn't exceedingly difficult, but it did offer a challenge. Critical thinking skills proved to be very important.
13. Yes. This course helped myself gain insight into statistical modeling. Also the SAS portion of the class helped the students help gain experience in coding and statistical programs.
14. Yes, it forced me to communicate my ideas to my group, along with analyzing their answers.
15. Yes, I had to think about how some set of data applied to answering questions.
16. This class was very intellectually stimulating, it really tested my brain with concepts and at first I struggled to grasp it but as time went on it clicked and really helped.
17. No

What aspects of this class contributed most to your learning?

1. The team-based learning format made approaching the content much more comfortable, as we could rely on teammates to assist with understanding the material.
2. The group work was very helpful to my learning.
3. Team-Based Learning
4. Talking to my team mates and working through problems with them outside of the classroom.
5. The TAPs and Homework
6. The class organization was very good.
7. Working outside of class on homework with my team really helped me learn.
8. The in-class examples
9. The "Team-Based Learning" contributed the most. It was a new experience for me, but I greatly appreciated the collaboration aspects involved in learning new material.
10. Clarification when there was confusion.
11. The LM assignments
12. The readings and group activities, as well as homework, contributed the most to learning information.
13. The team-based learning provided the opportunity to collaborate and work through difficult problems.
14. The team-based learning activities were always interactive and engaging.
15. I think that the homework assignments helped the most with my learning.
16. I feel the TBL style learning was beneficial for me because it gives you a group of people in the class you can rely on for help and support if needed.

What aspects of this class detracted from your learning?

2. The lack of lecture was detracting from my learning.
3. unclear SAS learning
4. The entire way the class was structured. I understand a flipped classroom for certain courses, but for something like statistics, students need instruction. I felt like I was doing self-study this entire semester and I struggle to learn like that.
5. The SAS
6. The course as a system seemed overly complicated.
7. When required to read the text outside of class, I often found it difficult to understand the topics and it requires a lot of effort to understand the material before coming to class. If you don't understand the readings, the class period is almost a waste of time.
8. Nothing really. Maybe the clarity of what we were to read for the RAT's
9. Often the professor's use of examples confused me more. There was a lack of explaining concepts in a simple manner; what I mean is only using statistical language to explain concepts. Although this is perfectly fine, for me I learn best when something is worded in a multitude of ways.
10. Not having traditional lecture.
11. Not having great explanations of topics due to the amount of group work.
12. The flipped classroom/TBL system was confusing to get used to at first, and being that this was the first time in this kind of environment for many of us, progress was slower.
13. I felt sometimes during TAPS, there was down time that could have been used to have more extensive mini-lectures. I feel the lectures would be extremely helpful in explaining concepts.
14. Nothing really detracted, but the homework often felt superfluous.
15. The Team Based Learning was kind of hard for me to grasp a handle on. I felt like the lectures were too spur of the moment, with virtually nothing written down by the professors, and the mini lectures were too fast.
16. I really am not sure, I was always pretty into the class setting.

What suggestions do you have for improving the class?

2. Maybe add some more lecture to the course and group work.
3. rewrite the way SAS code is taught
4. Maybe have the teacher spend a few minutes at the start of class doing an example problems, so students can see what they're supposed to be doing?
5. Focus on interpretation of SAS output rather than actually coding
6. Less time on how the course works and more about real material.
7. Keep the TBL teams. I love them.
8. don't be so picky about homework answers. He takes off a lot of points for very very minor things that he directly tells us in class, and then marks them as wrong
9. Be more clear about requirements on assignments because at times there were conflicting explanations on homework assignments for example. Also, too many typos throughout the semester.
10. Actual lecture
11. Better time management and explanations.
12. If there is a way to simplify the TBL system so that students may become more readily acclimated to it, that would be of great benefit. Also, more time for questions and answers regarding specific questions or about concepts would be helpful.
13. I would begin each TAP with a mini-lecture to cover general topics in the TAP if new information is covered. This will help enforce the information learned in the exercises.
14. Have a little bit of instruction time prior to each activity or at least unit.
15. Write down more during the mini lectures.
16. I feel that somehow incorporating some book stuff into the TBLs may be beneficial for when the homework comes around. Overall great class, I have always struggled with math at times and I feel like I actually understand what I am doing for the most part and Professor Dykes had a huge part in me getting over this hurdle. Awesome Prof.
17. Less team based learning more lecture and more examples in class

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific "things" the instructor did to help make the TBL experience beneficial for you.

1. By holding each team member accountable for attendance, readings, and homework, we all were more invested in the class, which improved our understanding and application of the concepts.
2. I like how the roles were written out and we could rotate, so one person was not doing all the work.
3. Only gave a few copies of the TBL's per group so we were forced to collaborate
4. I think the graded, anonymous peer evaluations kept everyone accountable. I also think providing a limited number of activity sheets made it so team members had to work with each other, and thus, share ideas.
5. The group aspect really helped along with enthusiasm
6. Constantly informing the class about how the structure worked.

7. The professor walked around and helped students who were stuck during tbl exercises.
8. good groups, Packets were easy to follow
9. The homework assignments required the student to apply information to situations rather than simply looking at notes and copying examples.
10. Forced us to work together by only giving three activities.
11. Going over answers each question.
12. -Assigned decent group work -Was available to go over questions or concerns
13. Walking around and helping each group with any questions was extremely beneficial.
14. Having specific roles kept everyone engaged and accountable, but...
15. I liked that Prof. Dykes held my teammates accountable.
16. He would always walk around and help make sure each group is doing okay and was very open to questions.
17. None

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

2. I think a lecture before team work would have been helpful, to give the team more direction.
4. Either cut out some sections or condense them. There were several times we were very rushed to complete an activity and didn't take the time to understand it. Maybe have the irat and trat after completing the activity for that section? There were times during the activity where I had "lightbulb" moments and realized what a question on the irat/trat was actually about.
5. Made homework more similar to TAPs which he did do mid semester
6. Focus less on how TBL works and more about statistics
7. Nothing. It was a very good system.
8. sometimes explanation is quick and not fully compatible with homework
9. Explain concepts in a multitude of ways; do not just rely on statistical language because some may not have the same amount of experience in statistics considering 216 is a relatively low-difficulty course.
10. Have a lecture and then using the other members on your team as help if things are not still clear.
11. Provide an answer key from the LMs
12. -More time for Q&A about problems and concepts -More comprehensive instruction about using SAS (such as a document of commonly used functions and proper syntax)
13. I would have enjoyed a little bit more lecture because I felt I was not quite understanding the information in depth as I would have.
14. ...Not every role was important. Only the writer and flipper really "needed" to be engaged.
15. Written down more notes when lecturing. Some of the language is hard to grasp when it is lectured quickly. I also wish that some of the questions I asked weren't answered with other questions.
16. The TBL experience was great, I do not have complaints.`
17. More lecture and more example in class

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. Doing all the readings is a necessity to do well on the I-RAT and T-RAT. They are a basic measure of understanding, but they do confirm that you "get" what you read.
2. Bouncing ideas off of team mates helped make the tbl experience beneficial to myself.
3. Did every reading before class so I was ready to contribute
4. I scheduled meet-ups with my teammates during the semester to work on homework together.
5. Communicated with my group
6. I did what the professor told me to do.
7. I read the book and took notes before class so I could help my team succeed during class.
8. showing up to class was the biggest part
9. I read all of the readings assigned, which helped me to better understand the material being discussed in class before I walked into class.
10. Ask team members for help in areas of confusion
11. Completed the pre readings and homework.
12. -Come to class prepared to work with group -Stay in contact with my group and ask questions if I had any
13. Doing the readings before hand and paying attention during discussion.
14. Tried my best.
15. I made myself the writer (even if I didn't have the final copy) so that I could write down notes directly on the questions.
16. I would do the pre readings the best I could so I was not a spud at the next class and could help contribute to my team and make the experience better for everyone.
17. Reach out to team members even if they never answered

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

2. Going to office hours would have made the experience more beneficial to me. After reading and watching the videos, I was still very confused and felt like I was not very useful to my team.
4. I could have gone to the tutoring center more, or went to the professor's office hours.
5. Read more
6. Gone to the professor if I had questions.
7. I could have worked harder on the homework.
8. maybe read more, or try to understand material better
10. Spent more time on the readings
11. I could of read the pre readings in more detail and taken better notes in class
12. -Work ahead more often -Be more active in group discussions
13. I should have went to more office hours to ask questions and worked on the homework earlier to receive help if needed.
14. More preparation for class.
15. I could have started to make the cheat sheets for the exams earlier.
16. If I would have understood that pre readings are helpful before hand I do not think I would have struggled as bad in the beginning.
17. Read the book more in depth

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked “Why?”

1. Yes, I would recommend switching. The structured in class activities and ability to work with teammates improves the class, in my opinion.
2. I think having a TBL learning experience is a great thing to have. My high school was all this. I would recommend taking at least one course that is TBL so that you get the experience of really working as a team.
3. Take TBL because it uses STA 216 to create real world research scenarios and forces you to participate in group work
4. I would tell them to switch to a non-TBL section. If you need more guidance on material or to see examples worked through before you start on the material yourself, a TBL format is not for you.
5. Take TBL it made class more interesting and easier to understand while working with your peers
6. Yes, the TBL is a good way of taking a statistics course. The structure also allows for being constantly informed about what is coming. Learning the structure is the hardest part.
7. I would say to take the TBL section because it is easier to learn in a group and everyone wants to succeed. There aren't group projects which is where groups usually fail so it is centered around your own individual success but working in a group. Also you make some good friends! I love it!
8. I would say it is worth it if this is the type of learning he uses because it is a good way to work through problems and share knowledge with a group
9. Yes because learning through collaboration rather than on an individual-to-professor level allows for students to interact more with people their own age. Sometimes a student who understands the material more than another student can explain the content in a new way that's different than the professor's explanations. Also, collaboration allows for learning both inside and outside the classroom much easier because one gets to know their group members well enough to ask outside of class for help.
10. I would suggest a non-TBL section if there is not time in their schedule to do the extra work a TBL section will require, such as thoroughly reading the chapters, taking notes on it, and watching the videos posted to blackboard.
11. I would say to switch based on how you learn best. If you like group and not as much lecture then stay. If you prefer lectures then switch.
12. The TBL section is beneficial for allowing the students to take control of their own learning, and allows them to work through concepts as a group rather than sitting in a lecture and taking notes. If they don't like lectures and can work with others to learn new concepts, then the TBL program would be beneficial for them. If they don't like to work in teams and would prefer the information to be taught more from the professor, then the TBL system may not be for them.
13. I would recommend STA 216 with TBL. TBL was an extremely beneficial way to learn statistics and provided opportunities to work with others to work through problems.
14. Take the TBL. The process keeps everyone engaged and accountable to their teammates. It also allows for constant self assessment of one's ability in the material. Unless the friend really likes lecture only classes, TBL is a good fit.
15. I would recommend that the friend takes the TBL section, but I might not feel the same way if I didn't have a wonderful team. I liked that you could work through questions together though. It also allowed me to connect with classmates if I needed their help with a question when studying for exams.
16. I would say yes, it gives you a group of students who all work together several times a week and that gives you comfort in the class to know you're not alone. As well as gives you more than just an instructor to rely on for help as well.
17. Non-team based learning, it just based on preference. I do not like this method of teaching and wish I would have taken a non-tbl

STA 216 05
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 24/26 (92% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.3	3.3
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.5
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	24	4%	38%	46%	12%			3.3	3.3
The course content was:	24	8%	33%	38%	17%	4%		3.3	3.3
The instructor's contribution to the course was:	24	8%	33%	38%	17%	4%		3.3	3.3
The instructor's effectiveness in teaching the subject matter was:	24	8%	29%	42%	17%		4%	3.2	3.2

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	24	8%	33%	33%	25%				5.2
The intellectual challenge presented was:	24	25%	42%	21%	12%				5.9
The amount of effort you put into this course was:	24	21%	50%	21%	8%				5.9
The amount of effort to succeed in this course was:	24	25%	33%	29%	12%				5.8
Your involvement in course (doing assignments, attending classes, etc.) was:	24	29%	42%	21%	8%				6.0

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 4.9 Hours per credit: 1.6 (N=23)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
4%	17%	39%	17%	9%	9%					4%	

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 3.6 Hours per credit: 1.2 (N=23)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
9%	39%	30%	13%	4%	4%						

What grade do you expect in this course?

Class median: 3.2 (N=23)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
4%	35%	13%	22%	9%	13%	4%								

In regard to your academic program, is this course best described as:

(N=22)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
32%	14%	5%	32%	18%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	24	21%	17%	46%	8%	8%		3.2	7
Explanations by instructor were:	24	12%	21%	42%	21%	4%		3.1	12
Instructor's ability to present alternative explanations when needed was:	24	21%	25%	38%	12%		4%	3.4	5
Instructor's use of examples and illustrations was:	24	12%	33%	42%	8%	4%		3.4	13
Quality of questions or problems raised by the instructor was:	24	17%	17%	54%	8%	4%		3.2	16
Student confidence in instructor's knowledge was:	24	29%	33%	29%	8%			3.9	6
Instructor's enthusiasm was:	24	38%	25%	33%	4%			4.0	2
Encouragement given students to express themselves was:	24	33%	21%	33%	8%	4%		3.7	8
Answers to student questions were:	24	4%	25%	46%	12%	12%		3.0	17
Availability of extra help when needed was:	24	25%	46%	25%	4%			4.0	1
Use of class time was:	24	21%	33%	33%	4%	4%	4%	3.6	3
Instructor's interest in whether students learned was:	24	25%	25%	42%	4%		4%	3.5	14
Amount you learned in the course was:	24	4%	33%	46%	8%	4%	4%	3.2	11
Relevance and usefulness of course content were:	24	12%	25%	54%	8%			3.3	15
Evaluative and grading techniques (tests, papers, projects, etc.) were:	24	12%	33%	42%	4%	8%		3.4	9
Reasonableness of assigned work was:	24	8%	42%	33%	12%	4%		3.5	10
Clarity of student responsibilities and requirements was:	24	25%	29%	38%	4%	4%		3.6	4

STA 216 05

Intermediate Applied Stats

Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online

Evaluation Form: A3

Responses: 24/26 (92% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Yes, when working as groups we had to think critically. \
2. Yes, this class was intellectually stimulating because at points it made me think deeply to find a strong comprehension of the topics. Yes, it did stretch my thinking because to understand somethings I had to think of things in a new way or apply them deeply.
4. Yes, this class was intellectually stimulating and did stretch my thinking. It was more in depth than STA 215, and I actually enjoyed the class.
5. yes, I liked figuring out real life problems.
7. Yes, statistics alone forces the thought process to think intellectually.
8. It had thinking a lot.
9. Yes, you have to go in deep and remember many notations.
10. This class really challenged me. I thought from going from 215 to 216 this was a very drastic change in material learned and a whole other computer program. I had to go for extra help a lot and put a lot more study time in.
13. Yeah definitely made me think. The material was difficult at times.
14. Yes it was. The team based learning was great and this is the first time I have had something like that for a class. Sometimes it was hard to pick up on things but it was good to have multiple thoughts on a single problem.
15. Sure
16. Yes. I learned about statistical methods that I hadn't been exposed to before.
17. Yes, I found the content to be difficult and challenged everything I knew.
18. I could have been if the content made sense and was taught better.
19. Yes this class really pushed me to try to figure out problems before going to outside sources to help me figure it out. This made the class extremely intellectually stimulating

What aspects of this class contributed most to your learning?

1. The reading and videos.
2. I think what contributed to my learning the most was when I was told specifically what was the right answer and why rather than being given a vague question as a response to a rather question.
4. I did like that we worked in groups throughout the semester. If we didn't know something, we simply asked another group member to explain. I also liked the videos that the professor put out in the beginning of the class.
5. The team based learning environment.
6. Group discussions.
7. When we would go over the questions we had as a class is when i would gain knowledge.
8. Working with my group whenever I had questions.
9. The professor and the group I was able to work with.
10. I liked that we could always talk to our peers about what we were thinking.
11. the explanations at the end of class
13. The short lectures were the best. That made completing the work so much easier.
14. The team based learning.
15. Personally I enjoyed the TBL system
16. 1. textbook 2. TAP's 3. homework 4. videos
17. the review of LM and cheatsheets.
18. Working in groups to find the answer. Having someone else to convey ideas was very helpful.
19. The video notes were extremely helpful. Along with the cheat sheets we were allowed to have on the exam because it allowed for us to look through all of our notes and was a great study tool.

What aspects of this class detracted from your learning?

1. N/A.

2. I think what detracted me from my learning in this class was when during TAP's me and my group didn't know the answer to advance and we either waited for the Prof. to come and explain or for the answers to be given as a group.
3. Not having notes of your own/lecture notes
4. I did not like that we never had any lectures. There were just some chapters that neither we individually nor we as a group understood. It would have been nice to sometimes get some guided structure for the harder lessons.
5. the minimal use of the required text.
6. Not much explanation about the concepts.
7. The limited amount of lectures.
8. Not much explanation from the instructor about each chapter.
9. The TBL style.
10. The TBL both was beneficial but I also felt like it detracted me from learning because it was so new and rushed at times and there was little explanation.
11. everything else
13. Reading the textbook was completely unnecessary save for the homework and RATs. It should not be required.
14. When the group did not know the answer, and was confused on how to solve a problem it seemed to be a little tough to get a straight answer from the professor when he was explaining it.
15. Lack of class lecture or information given in class
16. None.
17. Having it being a team based learning class.
18. How he didn't teach and the packets that were given didn't teach you at all it's more of a hope you went to the stats center before hand and learned from someone else then you might get the questions correct.
19. Not having a lecture over the material was difficult for me to learn because I learn the best when I have clear notes and examples.

What suggestions do you have for improving the class?

1. More mini-lectures throughout class time.
2. This leaning style was very new to me and still uncomfortable, but personally I am a fan of being told/ taught something then be given an example to use/ prove what I was just given.
4. I only really suggest teaching more of the material in class. If thats not possible, maybe put out more videos that are more in depth, because they faltered towards the last half of the semester. They were really valuable and helpful in the beginning.
5. more interaction with the book and team involvement.
6. Giving brief discussions in class and more videos.
7. More lectures and less individual teaching.
8. Do a small lecture about each chapter when starting a new one. It can make a difference.
9. TAKE OUT TBL
10. I think there should be more of a combination between traditional learning and TBL. Sometimes when I would get to my homework I wouldn't know how to do things because they were rushed through in our groups and we didn't get a full explanation from the professor. Also they way we learned SAS was very difficult for me. We were kind of thrown into something very foreign, the computer science people knew more of how to navigate it but for everyone else it was very hard to try and navigate.
11. more lecture and less team stuff. I expect to learn from professionals not from peers taking the same class. if the departments wants to use this system. they're going to need a better way of doing it.
12. Print out TBLs for all students before class
13. TBL in this setting does not work. The class is simply too difficult to be learned on your own. More instructor input is needed.
14. I actually like how the class is set up right now, the only thing that I could suggest would be having a review day to go over all the material that was going to be on the exam.
15. Mix some lesson lecture in with the TBL
16. Good as is. No changes.
17. Do no do the team based learning. Dykes as a professor is very good. I feel like he had limitations because of the way the class was.
18. Actually teach the material when you see us struggling to understand what the packets are asking show an example on the board of how to go about solving the problem before we even get to the problem instead of after we came up with the incorrect answer.
19. I would have liked to have some sort of a lecture on how to do the material we learned, or a lecture over the readings, or some sort of note taking part of the class that outlined what we needed to know and how we were supposed to do the material. Then if we were given assignments based on that material to complete with our groups, I think that would have been very beneficial for my learning. Other than that, I have no suggestions. The professor was very intelligent, and helpful, and a great instructor overall!
20. Having class time be almost purely group work I felt determined from the learning process. If the group work was more used as a way to check understanding than as the primary method of learning, the course as a whole would be much more smooth. Additionally, there were so many parts to the TBL that it took a while to understand that alone and what is needed for TBL, that it took away from the learning process.

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific “things” the instructor did to help make the TBL experience beneficial for you.

1. Answered and explained all questions in detail.
2. I was put in a group that included smart individuals that had the ability to find the right answer and explain how or why it is right, and the ability to listen to why they may be wrong sometimes.
3. We had partial credit on multiple choice questions. There were many examples and situations presented in the TAP's
4. The videos helped us to better understand the TAPS.
5. he only gave us a certain amount of learning packets to force teamwork.
6. Learn from TAPS
7. We got comfortable as a group and we would do a good job of teaching each other things that we did not understand.
8. Working in a group made a difference cause they have their explanations on why they think is right and wrong.
9. Showed concern with it.
10. I liked that we could get partial credit for our iRAT and tRAT and that the tRAT was worth more points because we could collaborate. I also liked that there was mini lectures and explanations at times.
11. kind of answered questions
14. He only gave us 3 tap activities to force us to work together as a team.
15. Dykes was very well organized with his lessons and assignments .
16. Walked around class during TAP's to answer questions.
18. Nothing they did not help at all. TBL was a joke and a failure at teaching the material.
19. He allowed for plenty of time to work on the material, that way if we had trouble with some problems we were not pressed for time when trying to figure out the correct solution. It was also very well organized. He also provided explanations to our group if none of us understood the material.

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. More mini-lectures.
2. I don't know for sure but I think some required time to do team work to be done outside of class could be beneficial for everyone.
3. Left 10-15 minutes at the end of class to do a mini recap lecture of the tap. Gave more time to talk through problems and questions with groups that aren't the TAP.
4. Like I said before, possibly lecture in class. If not, put out more frequent and in-depth videos because they were very beneficial.
5. answering more of our questions.
7. Spend more time explaining things to groups who are lost and struggling.
8. Posting an explanation about the questions in detail because I can't right down everything important detail in my notebook based on his explanations.
9. Nothing, the TBL style as a whole was just the worst.
10. I think there should have been more of an explanation of this learning experience we were going to be doing the WHOLE SEMESTER. I would have liked more explanation, especially if one or more groups had the same question then the professor should just explain it to everyone. There was also so much that had to be covered in a day that at the end the professor would just tell us the answers and we would never revisit those questions again.
11. more explanations
12. Everyone getting a copy of the tpls.
13. Groups should be set up based on ability. So smart people work with smart people and so on. That way students aren't waiting for others to reach conclusions the smart person arrived at minutes ago.
14. Just a better exam review to better understand what material will be on the exam would be nice.
15. Teach. Or at the very least give straight forward answers to some questions asked.
16. Good as is. No changes.
17. Notes, lectures.
18. Teach how to do the problems before either in a video or in class before sending us to the TBL to struggle and get even more lost and confused.
19. I think if there was some sort of an in class lecture that we could have had for us to take notes during it would have helped a lot. A lot of us were confused on the material in the TAPs because we didn't not have much of an understanding going into them. The videos were very helpful, but I think they would have been more helpful if they were in class so we could raise questions as a team.

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. Took notes on reading, videos, and during class time.
2. If I comprehended the material easier than I did.
3. Made sure I talked with the group and asked them if I was unsure of an answer
4. I always watched the videos and read the chapter before taking the rats and doing the TAPs. I also went to the stats center every week for help with homework, and I got a weekly stats tutor to explain the material in greater depth.
5. broke out of my comfort zone and worked with a whole team.
7. Making a group chat with our group that allowed us to communicate our questions to each other helped.

8. Going over the questions before taking an exam cause the TBL questions were gonna be similar to those on the exam.
9. Relied on group members.
10. I prepared myself for class by doing the readings and watching the videos. I also tried to ask questions when needed.
11. stats center so i actually learned things
14. I personally liked to see how the others in my group approached a problem, and if they got a different answer I would always ask them why.
15. Our team met up with each other outside of class to do the homework and study. Easily the best thing that came out of the course
16. I read the textbook.
17. Take advantage of the knowledge of my team and the stat lab.
18. Call the professor over to explain how to do a problem before I started the problem on the TBL.
19. I worked with my group a lot which was extremely helpful, especially when it came to the homework. Also reading from the book and watching the video notes helped to understand the material.

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Asked more questions during the TBL.
2. Read or reread more often. or possibly ask my group to meet outside of class to go over the material again
3. I could have prepared better for each lecture
4. I could have went to office hours for him to check questions on the homework that my group and I didn't understand.
5. worked on reading the text by myself more often.
7. If we had more mini lectures before we got sent with our groups on our own we would have had a better understanding while doing assignments.
8. Wished I could have contributed more cause my group did more of the work and so fast. I left like an outsider when they went through the questions and the homework assignments.
9. N/A
10. I could have taken notes on the readings and videos to take to class to have a reference. I could have also been more aggressive at asking for explanations.
12. Print the TBLs off after class.
14. Could've read up on the material a little bit more before class.
15. Do the work assigned outside of class
16. I could have done the readings earlier.
17. Viewed the videos and readings more.
18. Get a new professor to teach the material to me before doing the TBL then it might have been beneficial.
19. I could have reread from the book or rewatched the video notes after doing a TAP to understand it better.

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked “Why?”

1. If the student can complete the reading and prepare themselves sufficiently for class, they will do well in a TBL setting.
2. I think it is most important to consider the type of student my friend is. I don't think TBL is for everyone. If my friend can get along with a group of strangers, be able to spend roughly 2 hours a week on this course outside of class, be able to accept he is wrong, or explain why he is right then I would recommend him to stay in it
3. You get more clarification of the correct answer and do more exam type questions every day in a TBL section. You also apply the information instead of just learning it. I would recommend the TBL section
4. I would recommend the TBL if they added a lecture day once a week or once every two weeks or once at the beginning of each chapter. I loved working in groups. I established friendships and I feel I learned the material better than strictly being in a lecture-based learning environment. However, I do not think ONLY group work is entirely beneficial, either.
5. I would most likely recommend it just depends on the friend.
7. No, because we are taught a certain way our whole lives and this changed how we learned and basically made me go back to my roots on my own and teach myself the way i know how to learn.
8. Ask themselves on their skills level and how much they can handle. That's more important. How much a person can handle in their schedule, I've learned from personal experiences. Your own skills is what matters the most.
9. Non-TBL. We have to learn all of the material on our own and are put into groups with people who also do not know the material. So we are all just sitting there, unsure what the correct answer is. It would be much more effective to learn in a non-TBL environment.
10. I would ask if they were willing to learn a whole new way to learn. They would have to be super flexible on learning what TBL is while trying to learn content. If they didn't have an open mind to learning new classroom set ups then I would say not to take it. Basically you have to be ready to completely change the way that you learn. It's beneficial for some but others may really struggle. It's good to try new things but I would warn them that its very difficult to get used to.
11. wouldn't recommend because It is the most inefficient way to teach and it's excited poorly here.

12. I would recommend it because you have a group to work with in the event you are struggling and are not the type to ask anyone for help if you don't know them.
13. Switch. It'll make getting the good grade much easier. It's easier to work with and understand. The class is hard, it helps to have a knowledgeable guide rather than a team of equally confused team members. The TAPs are useful for reference on the homework, but not useful in learning.
14. I would recommend the team based learning because it is good to collaborate with other students in the class. Other students may be able to help you out more than you think, and this will also contribute to your learning as well because a student may be able to explain things in a different way than the professor making it more understandable to you.
15. I would encourage my friend to try the TBL class. Although not all of my peers enjoyed the class structure, I thought it was helpful and beneficial.
16. Take the TBL, because class time is mostly spent doing exercises with the instructor present to answer questions. This is a better way to spend class time than listening to lectures.
17. No, I am my team members found it difficult to excel in the TBL. There were no notes and or lectures to help understand fully what was being taught.
18. Switch to a non-TBL section you'll actually learn how to do the material required instead of struggling with others on a packet you have no clue how to solve.
19. I would always recommend the non-TBL section because I never really felt like I knew what was going on in the class. I enjoyed working with groups, but I did not feel like I really was truly learning. A lot of the times, my group and I were confused and did not understand the material, which made it very difficult at times. I really would have preferred for this class, and any other stats class, to be more lecture based with examples and then in class assignments to do with the groups you were put into. It's really difficult to basically have to teach yourself material that you have never learned or been exposed to be before. Then when tests came around I never felt prepared because I felt like I was never actually learning anything. I ended up knowing more than I thought I did, but there was always that uneasy feeling because I was never sure if I was on the right track.

STA 216 01
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 20/27 (74% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.5	3.9
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.2
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	20	25%	25%	20%	20%	5%	5%	3.5	3.9
The course content was:	20	30%	25%	30%	10%		5%	3.7	4.0
The instructor's contribution to the course was:	20	20%	30%	20%	20%	5%	5%	3.5	3.8
The instructor's effectiveness in teaching the subject matter was:	20	15%	30%	20%	20%	10%	5%	3.2	3.6

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Do you expect your grade in this course to be:	20	15%	20%	15%	35%	15%			4.5
The intellectual challenge presented was:	20	35%	10%	35%	20%				5.4
The amount of effort you put into this course was:	20	25%	30%	30%	15%				5.7
The amount of effort to succeed in this course was:	20	30%	40%	25%	5%				6.0
Your involvement in course (doing assignments, attending classes, etc.) was:	20	40%	30%	15%	15%				6.2

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 6.2 Hours per credit: 2.1 (N=20)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	5%	35%	30%	20%	10%						

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 4.6 Hours per credit: 1.5 (N=20)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	30%	35%	20%	5%	10%						

What grade do you expect in this course?

Class median: 3.3 (N=20)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
20%	15%	25%	30%			5%	5%							

In regard to your academic program, is this course best described as:

(N=20)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
40%	25%	5%	10%	15%	5%

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	20	20%	40%	20%	10%	5%	5%	3.8	5
Explanations by instructor were:	20	15%	40%	30%	10%		5%	3.6	12
Instructor's ability to present alternative explanations when needed was:	20	15%	40%	30%		10%	5%	3.6	13
Instructor's use of examples and illustrations was:	20	25%	30%	30%	5%	5%	5%	3.7	16
Quality of questions or problems raised by the instructor was:	20	30%	35%	25%	5%		5%	3.9	7
Student confidence in instructor's knowledge was:	20	40%	25%	30%			5%	4.1	14
Instructor's enthusiasm was:	20	55%	15%	15%	5%	5%	5%	4.6	1
Encouragement given students to express themselves was:	20	45%	15%	20%	10%	5%	5%	4.2	6
Answers to student questions were:	20	30%	25%	30%	10%		5%	3.7	15
Availability of extra help when needed was:	20	40%	25%	20%	5%	5%	5%	4.1	3
Use of class time was:	20	35%	25%	25%	5%	5%	5%	3.9	8
Instructor's interest in whether students learned was:	19	42%	16%	21%	11%	5%	5%	4.0	11
Amount you learned in the course was:	20	15%	25%	30%	20%	5%	5%	3.2	17
Relevance and usefulness of course content were:	20	30%	40%	15%	5%	5%	5%	4.0	4
Evaluative and grading techniques (tests, papers, projects, etc.) were:	20	20%	45%	20%		5%	10%	3.8	10
Reasonableness of assigned work was:	20	30%	35%	30%			5%	3.9	9
Clarity of student responsibilities and requirements was:	20	35%	35%	20%	5%		5%	4.1	2

STA 216 01
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 20/27 (74% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Yes it taught new concepts in statistical theory but in understanding the concepts in conjunction with the assigned homework and learning format(TBL) it made it slightly difficult to adjust to a somewhat self teaching method.
2. More often found myself confused and being lost in the class
3. It did stretch my thinking as it was all information I hadn't learned before.
5. This class was a team based learning class that promoted team thinking and team work.
7. Yes. Definitely forced me to use critical thinking at times.
8. I learned a lot about the field of statistics and I had to think about using graphs in ways I didn't expect.
9. Yes the activities that were given were effective enough
10. I really enjoyed the Team Based Learning style and working with a group
11. This course built on the concepts of STA 215, constantly making me think about what I knew in different ways.
12. Yes, the in class assignments were very helpful in allowing me to grasp the necessary material, while also providing an intellectual challenge.
13. Yes, it did. There were alot of times where I had to interpret from the given table or graph.
14. Yes, the material covered was pretty challenging in some instances, so it really required you to think through it
15. Yes because if it didn't stimulate/stretch my brain, I would fail this class...
17. yes! I really like the content that we learned and the real world examples that were used in class.
18. It was. I learned more about stats and stretched my thinking that way.
19. Great class team based learning really helped me further develop my understanding of the material

What aspects of this class contributed most to your learning?

2. Ability to work with a group
3. Reading the textbook on my own.
4. Making a cheat sheet
5. When the professor explained the topics that the class was having difficulty understanding.
7. Working with classmates that are better and worse at the class than I.
8. TBL allowed me to have a group of classmates to help if we got stuck on an area in class, which allowed us all to learn from eachother's right answers and mistakes.
9. Team application process
11. The homework assignments and the team-based learning component - being able to openly talk with someone else who is on the same level of understanding as me.
12. As stated above, the in class assignments helped the most with understanding the course and material.
13. Assignments and exams.
14. The homework
15. The homeworks and the groups we were put in
16. That it is team oriented.
17. I think that the homework was really beneficial for my understanding. overall, I really enjoyed this class. I would recommend people to take this class with you!
18. The few times the professor lectured and explained content, and working in a group.
19. Lectures and homework helped the most

What aspects of this class detracted from your learning?

2. Professor answered some questions by saying to look at past work, not saying which one just look at past work.
3. The team based learning aspect.
4. A lot of documents for exams, long exams, too much team work

5. The team based learning portion.
6. The textbook was not very good.
7. At the same time, working in groups with smarter individuals made me feel like I was left in the dust at times.
8. Learning SAS. It was not often used and it was hard to keep up with learning a programming language to interpret data and the other stats work.
9. I-RAT and T-RAT
11. Despite appreciating the team-based learning component, if no one in our team understands how to solve a problem, it can halt progress. This of course means we need to reach outside ourselves.
12. I wish more was explicitly taught in class. I feel like the readings and TBL forced us to spend more time than I often had time to lend to the class, and reinforced misunderstandings of the material.
13. Not being able to discuss with the group, since i was at the other end from my group.
14. Can't really think of anything
15. The not learning things in class. I understand he has it set up differently, but having such a different set up for an Intermediate Stats course just messed with me, I learn best when I am taught in class
17. My group for TBL was not the best. A lot of them would not show up a lot of time and I felt like I had to carry the team in a lot of the taps. however, I did like working with my teammates when they were in class.
18. The I-RATS and T-RATs, and lack of lectures.
19. Some of the codings was difficult to understand and interpret

What suggestions do you have for improving the class?

3. There needs to be more lecture, doing team based learning is great but about 90% of my group was confused the whole time because we were never taught information, we were supposed to learn it on our own.
5. If the class is a team based learning class, meaning you are supposed to be learning as and with your team and peers, then I feel attendance should be mandatory or taken. Many times my group of five was left working as a group of one or two, which did not help when trying to learn. It is difficult to learn as a team when your team does not show up.
6. I think there is lots of area to improve. It is very difficult class. This class is like self teaching class. The lay out of this class is very poor.
7. No easy suggestion for the course layout. I would have preferred a lecture class setup.
8. Maybe try to better integrate SAS, because while, in the statistical field, it seems very useful to know how to interpret different data sets with code, it seemed like we didn't use it enough to really learn it.
9. more explanation of the course content is required than self learning ,which is difficult at times without proper teaching
10. Many of us took Stats 215 a while ago so some review at the beginning of the semester would've been really helpful. Even just a couple video links or some reading on blackboard just to review key concepts and stuff like the hypothesis test
11. Consistently encourage students to discuss with group members, and then those outside, like the professor, when running into difficulty. Have open communication.
12. Perhaps spend more time with the readings. I find going into each learning module, I understand far less than I think that I do.
13. Maybe, try and assign seats for the group members properly and make sure no one is left out or is on the another row. Have all the group member face each other.
14. Maybe making the transition from a traditional classroom setting to the TBL one a little easier
16. Having someone who was taught how to teach. It was obvious that the professor knew the subject and knew what he was talking about. But he didn't know how to teach the subject effectively. Everyone has different learning styles, but that fact is ignored by this professor. Some students don't learn well by essentially teaching themselves something that they have very little knowledge of. The professor was never willing to admit that he could be doing things in a more effective way, he just blamed the students. A review of the material that was learned in the pre-rec class would have been extremely helpful as well seeing how plenty of students had taken the pre-rec over a year ago and don't remember much from that class.
17. I did enjoy the TBL, but some classes devoted to lecture may have also been helpful. I struggled with the SAS aspect of the class, and I feel like a day devoted to going over SAS may have helped.
18. Don't use the I-RAT/T-RAT system. The group focused learning was good but I would have also like more lecture time from the professor.
19. Focus more on how or what some of the sas code works and the tons of data it provides

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific "things" the instructor did to help make the TBL experience beneficial for you.

3. He left us in the same groups all semester.
5. N/A
7. It was not necessarily beneficial.
8. He provided clear, thought out explanations to questions
9. TRAT and Learning modules
10. The mini lectures and explaining answers to the whole class
11. We were given independence to work through the problems we understood and learn at our own pace, then we could ask for intervention when needed. When we also had questions after a T-RAT, there was intentional time to address them.
12. I did appreciate the ability for us to appeal on questions, and for us to choose specific things we didn't understand to talk about.

13. Kept every student in a diverse group.
14. Having the documents we worked on in class available online to look at later was really helpful for me
16. Making the activities in a google document so the entire team could work on them at the same time in class.
17. I liked that you would go over certain questions when the majority of the class did not give the correct answer, and I like that you were available during class to answer questions. i also liked teh google doc so that I could go back and review them before exams.
18. Being present to answer questions was helpful.

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

3. If hes not going to lecture he could of at least made videos and put them on blackboard. He made some videos for the easy chapter but stopped after the material got hard.
4. More lectures and concrete notes instead of only application problems/examples.
5. I believe the instructor could have made attendance more of a priority in the class since it is a team based learning environment.
7. Make it so each team member must pull their own weight.
8. Integrated SAS differently
11. At least once a week have an assistant during the working portions. There's only one of Dykes, and probably close to 30 students.
12. Spent more time going over the general information to help us better understand and combat misconceptions.
13. Everything was perfect.
14. Trying to understand the whole TBL thing was confusing at first. Eventually though it became helpful for me, but maybe there's a better way to help students who are more used to a traditional classroom setting transition easier
16. Give a summary or an intro of what we are about to learn instead of giving us an activity of entirely new material and leaving us to figure it out for ourselves.
17. The instructor could have encouraged group members to talk more. I know you did do this but I feel like a lot of group members still did not participate as a group.
18. Presented lectures at the beginning of class about the more complex or confusing aspects of the material.

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

3. I talked with my team mates quite a bit, and we reviewed material together.
5. I worked with other teams and not just my own. My own group was absent a lot of the time, so I collaborated with other groups and was able to still do my best to learn the material.
7. I was in a group with very smart individuals. I took this to my advantage and practically had them teach me the material.
8. Gave me a good group and we all helped each other do well in the course.
10. Working with my team on homework outside of class
11. Our team made a group text chat. We could ask questions about the homework.
12. The teamwork aspect of the class was beneficial, as my teammates helped me to better understand what I specifically struggled with.
13. Pre-readings definitely helped my TBL experience beneficial for myself.
14. Tried to contribute to the group
15. Worked way harder outside of class to try to learn the material and went to the stats center
16. Further improved teamwork skills.
17. I showed up to class, and tried to work with my teammates and ask them questions when i needed help. I also worked on homework outside of class with group members.
18. Making sure to participate with my teammates and share my answers.

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

3. Nothing.
5. I could have read the material before class and looked over upcoming questions before class so that way I knew what to better expect when coming to class each day.
6. Before going to the straight 216 material, brief explanation for 215 material will help understand student more about the 216 material.
7. I should have been better with completing the readings prior to certain learning modules.
8. Met with the professor more on specific topics I was struggling with.
11. Attend the statistics lab as a team.
12. Allocate more time to the readings, though I often didn't have the time to allocate.
13. Involved more in the discussions
14. Showing up to class a little more often
15. Having things briefly covered in the beginning of classes to make sure everyone's on the same page and knows what's important to know

16. Taken more notes from the reading.
17. I could have tried to talk more with my group members more during class time.
18. Come to class more often and offer to help my teammates if they seemed like they were struggling.

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked "Why?"

3. No, TBL is not effective in teaching material. I feel like I had to teach myself the whole course, and I pay a lot of money to be taught the material by the instructor. TBL should not be a form of teaching at GVSU.
4. I would tell them it depends if they believe themselves to be a better worker individually or in groups and ask what their learning style is
5. Personally I would not recommend a TBL class. I did not enjoy the class because it was a TBL set up. I personally do not thrive in an environment where everyone around me is also clueless and we are not getting a lot of feedback from the instructor on what to do.
6. Non TBL, Because that will make student and teacher more involve together in learning.
7. Switch to a non TBL system if he really wishes to challenge himself and master the material.
8. I'd urge them to take the TBL course because having a group is valuable when stuck on course problems and concepts
10. I would tell them to take it. Having a team to work with helps you make friends/study partners in the class. They are there to support you and make sure the whole team learns the content
11. I would recommend it. This style seems to slow down the intake of content by working on problems during class, and also unlike the traditionally taught 215 course I had, we are put into teams so that we actually work on these problems with other people.
12. Not. I personally prefer classes where the information is presented to me in a way other than readings before I am tested on them. I often feel my understanding of the
13. I'd suggest the friend to stick to TBL section, since it helps an introvert student to participate more in group discussions and you are often challenged to justify your answers and give analytical reasoning to the group members.
14. It really depends on what I know about that particular friend. Generally I would probably lean towards recommending that they stay in the TBL section. I say that because even though I'm usually much more of a "work on everything on my own" kind of person, TBL has actually been pretty helpful for me, and even though I was skeptical about it at first it ended up being something I enjoyed.
15. Depends on if they prefer to learn in class. If they can learn outside of class and apply it in class easily, I would tell them to go for it. But if they're hesitant or worried about it, I wouldn't recommend TBL
16. Yes - it allows for more options for how to solve problems and provides new perspectives.
17. I would recommend that they take the TBL section. I think that it very beneficial for this course. I also liked the notes that we could make on the taps to help us later to study for the ex mas. However, I would also warn them that they may get stuck in a bad group.
18. I would recommend it if I knew they learned best in team based environments. If I knew they learned best from lecture style classes I would recommend taking a non-TBL style class.

STA 216 02
Intermediate Applied Stats
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 24/27 (89% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.4	3.8
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.0
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	24	17%	21%	50%	8%	4%		3.2	3.7
The course content was:	24	17%	21%	54%	8%			3.3	3.7
The instructor's contribution to the course was:	24	29%	29%	29%	4%	8%		3.8	4.2
The instructor's effectiveness in teaching the subject matter was:	24	21%	25%	42%	8%	4%		3.4	3.9

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Do you expect your grade in this course to be:	24	4%	33%	8%	38%	8%	8%		4.4
The intellectual challenge presented was:	24	12%	42%	25%	17%		4%		5.6
The amount of effort you put into this course was:	24	17%	33%	25%	21%		4%		5.5
The amount of effort to succeed in this course was:	24	21%	42%	17%	21%				5.8
Your involvement in course (doing assignments, attending classes, etc.) was:	24	29%	29%	17%	21%	4%			5.8

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 5.3 Hours per credit: 1.8 (N=24)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
17%		38%	38%	8%							

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 4.1 Hours per credit: 1.4 (N=24)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
17%	25%	29%	25%	4%							

What grade do you expect in this course?

Class median: 3.2 (N=24)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
21%	8%	25%	21%	8%		8%	4%							4%

In regard to your academic program, is this course best described as:

(N=23)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
35%	22%		9%	30%	4%

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	24	33%	38%	25%	4%			4.1	3
Explanations by instructor were:	24	25%	38%	33%	4%			3.8	7
Instructor's ability to present alternative explanations when needed was:	24	25%	46%	17%	12%			4.0	6
Instructor's use of examples and illustrations was:	24	29%	33%	17%	21%			3.9	11
Quality of questions or problems raised by the instructor was:	24	29%	33%	25%	12%			3.9	10
Student confidence in instructor's knowledge was:	24	42%	33%	25%				4.2	9
Instructor's enthusiasm was:	24	42%	33%	21%	4%			4.2	8
Encouragement given students to express themselves was:	24	50%	25%	21%		4%		4.5	2
Answers to student questions were:	24	42%	21%	29%	4%	4%		4.1	5
Availability of extra help when needed was:	24	50%	21%	25%		4%		4.5	1
Use of class time was:	24	25%	21%	42%		12%		3.4	17
Instructor's interest in whether students learned was:	24	25%	33%	38%		4%		3.8	14
Amount you learned in the course was:	24	17%	25%	50%	4%	4%		3.3	15
Relevance and usefulness of course content were:	23	26%	30%	39%	4%			3.7	12
Evaluative and grading techniques (tests, papers, projects, etc.) were:	24	17%	33%	38%	8%	4%		3.5	13
Reasonableness of assigned work was:	24	29%	21%	42%	8%			3.5	16
Clarity of student responsibilities and requirements was:	24	42%	25%	33%				4.2	4

STA 216 02

Intermediate Applied Stats

Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online

Evaluation Form: A3

Responses: 24/27 (89% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. This class took a lot out of me. The concepts were difficult for me to understand at first which required me to look over them for hours outside of class.
2. Yes
3. Yes, great course content and I learned a lot
4. I wouldn't say that I learned anything profound, but I do know how to do some statistical work beyond what is taught in 215 now.
5. I think it made me think in a different way than I'm used to since stats isn't math heavy but heavy in thinking.
6. Yes
7. No.
8. Yes. This is the first class I had where we had to code. I found it interesting
10. It stretched my thinking in regards to stats.
11. Kind of. It is stats.
12. This was material I had never learned before so it really stretched my thinking.
13. This was a good starting class for me going into Statistics
14. Yes it was, activities in class involved real data and made it more engaging.
15. This course was very intellectually stimulating. It did not always stretch my thinking; the problems assigned were not always aimed at creative thinking and problem solving. However, I think this is more of a symptom of the material rather than the instructor.
16. the professor had me engaged simply because, even though it was a stats class, he used in his exercise real word statistical data. where I think most professor might use fake data just to illustrate a concept, he preferred to use real life data.
17. Yes it was. Assignments stretched my thinking especially ones with SAS. SAS is a new program to me and it was interesting to learn how to use.
18. Yes, it helped me with the ability to read data and interpret it much easier prior to taking the course.
19. Yes, I had to learn coding
20. The TBL structure was an adjustment but one that I liked.

What aspects of this class contributed most to your learning?

1. Reviewing the TAPs reinforced my learning and helped prepare me for the exams.
2. I think the homeworks and tests did. The class activities prepared me for the tests.
3. In Class assignments and Homework
4. Team based learning, in my opinion, contributed the most to my learning in this course.
5. I think that the group learning would've been really great had my group actually showed up to class. I think he did a very good job of teaching and explaining and I didn't feel scared to ask him a question like I do in some of my other classes.
6. I liked working on things in class. GOOGLE DRIVE WAS GREAT. PLEASE KEEP USING IT. It was nice to go back over notes and unhighlight everything and then re-answer things to prepare for the tests. With a physical document, this would be much more difficult.
7. None
8. instructors explanations about learning module problems
9. Professor Dykes explaining the class work
10. Group work helped
11. Reading
12. Being able to talk with a team and share ideas and opinions.
13. The TBL experience was helpful for me
14. TBL
15. Nothing stands out
16. the teacher when he went over the team based in class exercises.
17. Homework assignments.
18. The in class examples and explanations.

19. Doing Homework
20. Group work in class

What aspects of this class detracted from your learning?

1. The amount of class work is daunting.
2. Sometimes I wished that we had more guidance before doing the activities.
3. none
4. The text book seemed superfluous at times, and snow week made the class a little more difficult than a semester without snow week would have been, though that is at no fault of the instructor or GV as a whole.
5. Of the 6 people in my group only one showed up every day. Also maybe giving more time for the tests since i ran out on both of them and the time crunch effected my grade
6. I didn't love the TBL model, I wish we had more autonomy over who we were placed with and where we sat. Personalities didn't work well together. The book was also pretty confusing, I wish the book were more accessible.
7. Tbl, taps, rats
8. when my group was confused about something on the learning module
9. I did not like the Team Based Learning format at all honestly, class would have been much better had there been lectures.
10. Only being group work instead of any real teachings/lectures. Felt a lot like I was teaching myself.
11. TBL
12. The set of up of the class was very difficult to be in team based learning. When going to the professor's office for questions he often said he could not help me answer many things. I did not really know how to learn in the class even though I was doing all the necessary reading and more.
13. N/A
14. Nothing
15. Nothing stands out
16. not having a tradition lecture format to discuss what was read in the textbook.
17. The in class assignments were helpful but not as helpful as they could have been. I feel that early on in the semester we were really thrown into the topics without any direction or help. This was reflected by our first exam scores and the opportunity to replace those. But I think the professor realized about halfway through the semester that he needed to do better after we did midterm feedback to him. After that in class was much better and he actually began to teach and direct our learning much more and provide examples and actually write on the board and things like that. It became a more engaging class experience supplemented by the professor, rather than sitting behind a computer and just going over the answers with no reasoning.
18. The lack of cooperation between the group in some cases.
19. I-Rats
20. My attendance issues

What suggestions do you have for improving the class?

1. Less work and more reinforcement of the concepts learned in class.
2. If the class reverts back from google docs to using paper hand outs, there are two problems: 1. You can't look back at the activities while studying or doing homework 2. Not everyone would be able to see the handouts the way the classroom is arranged. 6 people sharing 3 is hard. I think it would be a lot more reasonable if there were 4 packets being shared.
3. More review for the test
4. I can't think of anything major to change about the class.
5. Maybe if you see a trend of people not showing up every day combine two smaller groups together
7. More teaching
8. more mini lectures
9. Completely remove team based learning.
10. More lectures instead of just group work
11. Remove TBL from all GVSU stats courses.
12. More mini-lectures should be included each day to build off our reading and team activities, otherwise having a professor stay in the class seems almost unnecessary at times. Also, I never had enough time to finish exams because their were several packets of output data and questions and many of us discussed getting lost in it and wasting time flipping pages rather than working on problems.
13. N/A
14. Nothing
15. Nothing significant
16. I think the team based computer exercises where great, but with a class 3 days a week maybe one of those days could of been devoted to lectures and understanding the concepts out of the textbook.
17. I always found the tests to be confusing. You are given so many packets of paper and each question is spread out with possible information in another packet. And some of the data sets in a packet might not even be used. It was a jumbled mess in my opinion. Have 1 separate answer sheet and a 1 packet of questions and leave it at that.
18. No suggestions for this course.

19. More in class SAS Practice
20. More class involvement

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific “things” the instructor did to help make the TBL experience beneficial for you.

1. The RATs are beneficial but I wish I could look at them outside of taking them in class.
2. I think being able to adjust the course as needed
3. google drive was awesome to share docs
4. The shared google documents were a massive help in resource pooling and note taking.
5. there was a lot more information in the classwork which made it easier to understand what was happening in the problems also he was floating around the classroom constantly listening in and giving help when needed which I had never had a TBL teach do before, most of them just sit and do nothing at their desk and then complain that you don't know what you're doing
6. I guess I don't know what goes on behind the scenes, but I liked that things were always prepared. I also really liked that he let us use the computers and Google Drive was actually super super super helpful. I liked it a lot.
7. None
8. mini lectures
9. Going through the assignments at the end of class
10. Answered questions when presented
11. office hours and emails
12. Peer evaluations were helpful so it felt like we at least had a say, but also he encouraged us to talk to one another often.
13. It was beneficial to talk through all the concepts with my group and then the Professor.
14. Made sure we talked as groups during activities, t-rats do the same.
15. Nothing stands out
16. by being available to help us should we run into problems, and that he encouraged us to solve problems as a group.
17. 1. Allowed us to use google docs with our group
18. He made sure that we had the correct answers to the questions after we worked through them ourselves. He also provided guidance on the parts that were confusing or may have been hard to interpret.
19. Clarifying SAS
20. Encouraged group work, made us talk

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Possibly have more mini quizzes that don't count towards relatively any points. Just to stretch our learning within the classroom.
2. Read more thoroughly
3. explain more. But overall it was great
4. Nothing comes to mind in terms of improvement for the instructor.
5. trying to keep the team accountable. its hard to have a TBL class when only one person from your team comes to class everyday and then when someone else shows up after missing a few days you spend more time filling them in on what they missed vs actually doing the assignment
6. I wish I got to choose where I sat in the class.
7. Instructor cant change it, but seating was not optimal for groups larger than 2 or 3. I would have preferred to be in a group with my friends, but I couldn't because the groups were already picked for us
8. provided practice problems for exams
9. NO TBL.
10. More lectures
11. n/a
12. Taking attendance is necessary for this course, not many people showed up and they got away with since we filled the documents in for them.
13. Less TAP activities on the computer and more on worksheets.
14. Nothing
15. Nothing significant
16. probably made his worksheets more user friendly.
17. 1. Explain the answers to questions more 2. Possibly do an ungraded post test after the module to test your learning before you take the actual exam.
18. Not much that could have been done that I believe would have made the experience better. Other than the suggestion of rotating the groups ever so often s students are able to work with others and learn different techniques while cooperating with different students.
19. Not sure

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. My group would review together in preparation for the homework and exams. We created a study guide for both and contributed all of our individual ideas within it.
2. I used the book to help me go through the activities and I asked my group members what they thought.
3. Pay more attention
4. While it took a bit of the semester for me to start talking to my group-mates, I found communication and trying to gather everyone's opinions on problems was a great way to get new insight.
5. I tried watching the videos before coming to class and explaining things to the group members when they didn't understand
6. I did all the readings and required things
7. None
8. strong communication with group
9. Study hard online, with youtube.
10. Made sure I was at class to help my group
11. i tried, i really did. TBL just isn't for me i guess.
12. I started and contributed to documents to make sure the team collaborated about homework and other readings. This way I could learn from others.
13. I tried to communicate with my teammates as much as possible.
14. Spoke with group members, presented my ideas and the reasoning for them.
15. Nothing significant
16. working with the group to figure out problems.
17. 1. Used my book for help 2. Asked my group questions when I needed to
18. I would try to come to every class with an overall basic understanding of the material to be able to contribute to my group effectively. Also attended a many classes as possible to be able to consistently contribute to group assignments.
19. Homework
20. When I made my attendance more important, it helped quite a bit

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. I could meet with my class mates after class to review what we just did on a TAP.
2. If people participated more.
3. get more sleep so I could contribute more
4. I should have spoken to my group more at the beginning of the semester.
5. I could've read more outside class and tried to fully understand the material before coming into class and asked more questions when i was confused about things
6. I could have worked with group members better
7. None
8. more practice outside of class
10. Review 215 information more
11. Eliminate TBL
12. Confronting those who rarely showed up to class would have been a good idea.
13. Trying to get my teammates to communicate more often.
14. Been more confident in my answers during t-rats.
15. Nothing significant
16. by practicing and studying the materials for the I-rats and T-rats ahead of time.
17. 1. Engage with my group more
18. One thing that makes a huge difference is attendance, missing one or two classes in any module really hurts you and your group so that is something I could have improved over the semester.
19. Prepare more for RATS
20. shown up more earlier in the semester

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked “Why?”

1. TBL section all the way. Going over concepts and coursework as a team only reinforces the material to the learner. I would be way behind if it wasn't for my awesome team.
2. I don't think I'd tell them to take it or tell them not to take it. I'd just explain what the TBL course was like and I'd try to do it objectively, since I'm not sure which way they learn better.
3. Yes, helped so much and sharing ideas was really beneficial
4. I would recommend TBL to my friend. I had it recommended to me for this semester and I found it much easier to work in groups and have people to ask questions to than in 215 and studying solo.
5. I hate TBL it's not my type of learning and I typically struggle in a team setting and having to rely on other people. I would only say the them to take TBL if you have Dykes as a teacher. I've been in TBL classes since high school and I have never had a good experience with it until this class. He's the only teacher that has successfully done TBL
6. I would recommend that they switch if they can because this was where you had to teach yourself and the regular model is where you can learn from the teacher and that's just easier
7. Non-TBL. Being forced into a group for an entire semester is usually not fun regardless of the course
8. I would recommend non-TBL sections. I would have liked a more note-taking structured class because that is how I learn best
9. Switch to a different definitely. Team based learning mostly detracted from my learning, I felt much more could have been learned had we had a lecture format.
10. TBL section because it pushes you to attend more but be ready to learn it yourself
11. NON-TBL. Not my learning style. I didnt know it was TBL when i signed up
12. STA 216 is not a class that fits the TBL learning environment. Some concepts need to simply be taught by an instructor in class. Its hard to build off others ideas in a stats class when most of the answers are either right or wrong.
13. TBL experience is better than any other teaching method I have had. It allows me to talk to my peers on situations first and then talk to the instructor after if I am still having problems.
14. Stay in TBL. I felt like I learned the material without really doing anything. The activities teach you it without you knowing
15. I would recommend TBL over non-TBL. I appreciated the structure of TBL and prefer it over courses structured in other manners.
16. so, if you hate the lecture format and prefer to be more hands on then TBL is the right option. but if your like me and wanted a mixture of TBL with lecture then I would advise against it. like I said being a 3 day a week class I would of preferred to have one day devoted just to lecture and have the other days devoted to TBL.
17. Depends on your learning style. TBL section is much more all on you learning. It is not lecture based at all. Overall I think I would have preferred a non-TBL section because of this.
18. I would say it depends on how the students feels they learn best. My first suggestion would be to take the TBL course to be able to learn from the professor with the assistance from other students. This way allows for you to learn the material the best, but if they learn better on their own I would recommend non-TBL section.
19. If you prefer not to work in teams, you would probably switch out, if you are perfectly fine with teams, remain where you are.
20. I would recommend the TBL class because of the uniqueness of the system and in my personal experiance it has worked well for me.

STA 215 57
Intro Applied Statistics
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 26/29 (90% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.6	3.7
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.4
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	26	15%	31%	23%	19%	12%		3.3	3.6
The course content was:	26	8%	38%	31%	19%	4%		3.4	3.6
The instructor's contribution to the course was:	26	27%	35%	8%	27%	4%		3.8	4.0
The instructor's effectiveness in teaching the subject matter was:	26	19%	35%	19%	19%	4%	4%	3.6	3.8

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	26	8%	31%	27%	35%				5.1
The intellectual challenge presented was:	26	8%	42%	19%	31%				5.5
The amount of effort you put into this course was:	26	15%	27%	12%	46%				4.8
The amount of effort to succeed in this course was:	26	8%	38%	15%	38%				5.2
Your involvement in course (doing assignments, attending classes, etc.) was:	26	19%	31%	19%	31%				5.5

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 5.3 Hours per credit: 1.8 (N=26)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	12%	42%	19%	23%	4%						

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 3.3 Hours per credit: 1.1 (N=26)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	19%	35%	35%	12%							

What grade do you expect in this course?

Class median: 3.3 (N=26)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
12%	19%	35%	12%	12%	8%	4%								

In regard to your academic program, is this course best described as:

(N=26)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
27%	27%	4%	8%	35%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	26	27%	27%	23%	15%	8%		3.6	3
Explanations by instructor were:	26	19%	35%	23%	12%	8%	4%	3.6	6
Instructor's ability to present alternative explanations when needed was:	26	27%	35%	15%	15%	8%		3.8	2
Instructor's use of examples and illustrations was:	26	19%	42%	12%	23%		4%	3.8	8
Quality of questions or problems raised by the instructor was:	25	24%	36%	20%	12%	8%		3.8	7
Student confidence in instructor's knowledge was:	26	35%	31%	23%	8%	4%		4.0	10
Instructor's enthusiasm was:	26	46%	15%	23%	8%	4%	4%	4.2	1
Encouragement given students to express themselves was:	26	35%	23%	15%	27%			3.8	11
Answers to student questions were:	26	15%	38%	23%	12%	8%	4%	3.6	12
Availability of extra help when needed was:	26	27%	23%	27%	15%	8%		3.5	16
Use of class time was:	26	23%	27%	23%	15%	12%		3.5	13
Instructor's interest in whether students learned was:	26	35%	19%	27%	8%	12%		3.7	14
Amount you learned in the course was:	26	15%	46%	19%	8%	8%	4%	3.8	4
Relevance and usefulness of course content were:	25	16%	24%	36%	16%	4%	4%	3.2	17
Evaluative and grading techniques (tests, papers, projects, etc.) were:	26	15%	31%	23%	23%	8%		3.3	15
Reasonableness of assigned work was:	26	15%	42%	19%	15%	8%		3.7	9
Clarity of student responsibilities and requirements was:	26	27%	35%	12%	19%	4%	4%	3.8	5

STA 215 57

Intro Applied Statistics

Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online

Evaluation Form: A3

Responses: 26/29 (90% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. yes lots of questions and problems that require u to use knowledge and think logically
4. No, this class was not.
5. Yes. We were always given detailed activities which were generally interesting and good at applying the book material.
6. Yes, the class really made me think about the data I am presented on a daily basis and how important it is to be able to understand it.
7. Yes, it was, very different style of learning that I have ever had before. It was rather tough due to the fact that we did Team-Based learning and at times I felt as if I were teaching myself the information with a tutor like atmosphere. When the professor spoke and did mini-lectures had much valuable information, wish Professor Dykes spoke more, when he did it was very helpful and showed how much he knew about the class.
8. Yes, this was the first stats class I've ever taken and it really brought new ideas
9. Yes!! The class was constantly making you think outside of the box
10. stretched my understanding of stats and how to apply them
11. The class was not intellectually stimulating because I was too confused.
12. There were a few difficult concepts to understand but I never felt overwhelmed or out of the loop. I am pretty good at math so I didn't struggle too much with the content.
13. Yes, I learned how statistics work and there was plenty of content to learn and go over.
14. It was stimulating. This stuff isn't easy and takes time and effort to understand
15. Yes because I have never taken a statistics course.
17. yes because you had to teach everything to yourself, probably more stressful then stimulating
18. This class made me understand some the more technical aspects of statistics. I had never taken a stats course before this one and it definitely had some new material for me.
19. I gained a decent understanding of statistics.
20. Stats class is something that I was dreading going into it. It for sure made me think a lot.
21. I have never taken a stats class before so a lot of this material was new, but some of the content I have learned in other classes I've taken. It was not a very difficult class, though.
22. At first the class is difficult because it is all new terminology and concepts that I hadn't been used to, but once the basics are understood it is just up to you to utilize them in different ways.

What aspects of this class contributed most to your learning?

1. in class, homework
4. figuring out the homework on own.
5. The homeworks were a nice review of the information in the activities.
6. Working on activities as a group and going over them.
7. Mini-lectures and the amount of hands-on learning in class. When the class obviously struggled with certain topics class was slowed down until it seemed everyone had a decent understanding of what was being taught.
8. Each class working on a new packet was nice
9. The learning modules contributed the most
10. hw, in class activities
11. I struggled to find aspects of the class that contribute and help improve my learning. The professor is very knowledgeable and tenacious, but their teaching style doesn't help students who don't understand math. Occasionally, group work contributed to my learning, but I found that when the professor explained material to the class, is when I began to somewhat understand what was happening.
12. The homework were helpful because they gave me a lot more practice and allowed me to reflect on what we went over in class.
13. The in-class assignments.
14. The TBL aspect of this class contributed most to my learning. My group members were great to work with
15. The group work definitely helped me learn material but the few days I missed really hurt my ability to do well on tests, even with the formula sheets.
18. The lecture consisted of a team-based learning style that sometimes got old but also helped. When myself or my group members would have a question, we would ask each other so that way we would all be able to learn.

20. I liked the fact that I felt we were always doing something in the class. A lot of professors just read from a slideshow which I do not like.
21. Being split into groups took some getting used to but I liked being able to work with other people and ask them questions about homework and things like that. The in class activities were mostly helpful as well.
22. The team based learning I felt was very helpful in order to succeed in this class. The homework assignments were a good reflection of what knowledge was required and were able to thoroughly prepare someone for the exams.

What aspects of this class detracted from your learning?

1. none
2. This class was not easy to succeed in. The professor had one way of teaching and could not adapt to student feedback.
3. professor barely taught the class, wasn't very nice when asking questions
4. poor in class explanations
5. None. I felt like everything we did was well structured, and purposeful.
6. No aspects from the class detracted from my learning.
7. Felt that the majority of the learning was done away from the classroom and it can be very frustrating at times. Little lecture but wish there was more due to instructors knowledge of the field and it was clear with the energy brought to class by him every day.
8. Spss was really easy and I kinda feel like it was a waste of class time, the graph were easy to make and it'd be easier and faster if I didn't have to make it
9. It was difficult when the group assigned did not always contribute or care about assignments or learning
10. none
11. Constant group work sounds like a wonderful idea, except that I am an extremely slow learner/reader. Group members would fly through the questions before I had time to fully comprehend what I am being asked to do and the professor's explanations usually left me more confused. Being expected to fully understand material specifically from the textbook well enough to be quizzed over it also detracted from my learning. I searched to memorize definitions, not understand material.
12. I learn better when I receive new information in class rather than reading it by myself because I then have to spend more time trying to figure out what is being discussed.
13. Bad group members
14. I became friends with my group so I believe TBL can be a blessing and a curse. We learned really quickly how to get down to business though.
15. Sometimes the group work got really distracting with side conversations, so while it is a good tool the people in the group need to be active as well.
17. the amount of frustration felt from the expectation to teach yourself everything
18. Some of the team-based activities didn't really help all too much but I feel like that may have been my own fault for not asking the questions that I had.
20. Well, I was not a fan of TBL. I had a terrible group so it made my experience not as good. I felt I was the only one doing anything, and I did not like feeling like it was constantly my responsibility to teach my group because they did not pay attention. I wish we could have switched groups every few weeks or something so that those with bad groups could still enjoy TBL.
21. Having to read and learn the material on my own and then take a quiz on it didn't help me learn the material. Also, due dates would get confusing sometimes. Following the syllabus wasn't useful since we had the snow week. Sometimes it felt like we were in kindergarten with the "fun bags" and being treated like we're little kids.
22. While the team based learning is helpful, I feel that there are some concepts, especially in the introductory part of the semester that would be better learned individually. When working with a group there are times where you rely on other group members and I feel I missed some important core material that I wouldn't have if I were put in the position of learning it on my own.

What suggestions do you have for improving the class?

1. none
2. Listen to your students and teach more lessons. I am paying for someone to teach me statistics, not for me to teach myself.
3. team based learning sucks
4. explain better
5. Maybe provide more feedback when grading. Sometimes it was hard to know why I was marked down for something.
6. I can't think of any suggestions to improve the class, for me the way the class was run worked ever well with my style of learning and I enjoyed it very much.
7. Try and speak more and explain topics, the readings are long and often become more confusing than helpful. If you'd like to continue TBL I would suggest making Powerpoints with key information that is somewhat a reading guide to help students follow important information and learn and understand the information better. Homework was hard, it seemed many times that we didn't always cover everything we needed to in order to complete the homework. I really didn't hate the class, enjoyed time just personally think some of these tips can help improve the course. In the end if I took another Stats class I would look for Professor Dykes.
8. Maybe intervene with groups a bit more, sometimes I felt overwhelmed and the group didn't help with understanding or didn't understand and just rolled with what ever you said the answer was
9. Making the grades more balanced so it does not just depend on Exams
10. class is fine

11. Explain concepts at the beginning of the chapter in a note taking session with smaller individual/group opportunities to apply the ideas. Quiz on material that has been discussed and applied in class supplemented with textbook reading outside of class.
12. I like the group work, I think it works really well for this type of class but I would have to say that maybe a little more note taking in class would be a nice addition.
13. The class is set up well and the only thing that could change is making sure groups are not stagnated by intelligence
14. If there's anyway to give some explanations before taking I-RATs that would be nice because I would complete the readings and go over them and I still didn't do well.
15. None, class time is fun and engaging.
16. Group exams since TBL
18. I feel like the structure of the class worked but the content made it less enjoyable for me. The instructor did a good job of explaining things that you weren't sure about.
19. I reccomend staying on some subjects more rather than flying through the class. There were a lot of misunderstandings this semester on subjects and it showed in exams. The second exam this semester specifically there were about 3 students who got in A range and were on the low end. To get an A is 93% and above which seems very excessive.
20. 1. Switch the groups every couple of weeks. 2. Do a bit more teaching, Stats is difficult so it should not be on us to have to teach ourselves everything. 3. Less group work, more individual stuff
21. Maybe post weekly announcements to blackboard reminding us of what is due and uploading an updated schedule after classes are cancelled.
22. For in class portions I feel like there are some activities that would be more beneficial if completed individually and then maybe gather in groups for reassurance.

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific "things" the instructor did to help make the TBL experience beneficial for you.

1. team work and talking through things
4. Nothing made it better
5. The stoping points in the activities were very helpful! It was nice to check our work as we went along in the activities.
6. The entire TBL system was beneficial for me, learning the information on my own before class then having it reinforced and sorted out through activities and lecture was very helpful to me.
7. Mini-lectures and ability to explain tough concepts throughout the course. I liked being put with a group which I had contact with that did help me with learning some of the tougher material.
8. I liked the group quizzes but I also like that we had to take them individually. It was nice to here different answers and explanations for something I may not have gotten
9. The instructor was always willing to give more examples or help explain
10. - the explanation of what TBL is helped - comes over to check on teams
11. The professor provides peer evaluations, which seem helpful, but given the aggressive nature of some group members, I was nervous to be completely honest in their evaluation. The team based learning was not beneficial for me.
12. For every IRAT and TRAT my professor would have us mark which questions gave us the most difficulty and he would either go over it with the whole class or in the individual groups. This helped me understand confusing topics a lot more.
13. He always was able to explain what I could do better and he was always able to answer questions when needed.
14. Allowing us to rank our answers is the best thing that made this experience better than what it would've been. I never left feeling terrible about myself which I think is really important because some college students have very fragile mental health
15. Assigned homework with a very reasonable amount of time to get it done.
18. I could ask my team members questions if I had any and also, if they had any questions then I could help them and learn it even better. I feel that when you teach someone else you it grows your knowledge of the subject.
20. Provided page numbers that link to the book so we can have a good place to look for questions and made the activities clear and easy to understand.
21. going over the answers to the in class activities in detail and the exam coverage sheets were helpful.
22. Made the activities relevant and interesting in order to learn the material.

Identify one or two specific "things" the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. none
3. we taught ourselves basically everything, he rarely ever taught.. I shouldn't have to pay money for a professor to just do nothing.
4. better explaining and using different techniques to explain
5. Make attendance mandatory.
6. The only thing that the instructor could have done to make the TBL experience more beneficial for me would be if the gave opportunities to regain points lost in the homework, some points I lost were due to little mistakes that I felt I should not have costed me as many points as they did.
7. I mentioned it before, but a reading guide or Powerpoint with more of the highlighted key points, the readings tended to be long and wordy as textbooks can be. Lecture more as I got my best notes and learned the most within Mini-lectures.

8. At first I didn't like the format because it felt hand holdy but that's not so much it. I'm not sure how to improve it but possibly transition it better to the students better in the beginning so they don't resent the whole format the whole time
9. Sometimes it felt the homework was graded harshly when the examples were not always explained to us during the learning modules
10. - we didn't really have a lot of time to get to know each other so there were a lot of awkward silences between work. i don't what to to about that one - Many times our team would just split up during taps and work individually
11. Choosing teams based on personality or mathematical experience/confidence may help. Provide enough copies of each assignment that people can work individually if their team does not function properly. Suggest to members that it is a symbiotic relationship not a race to the finish.
12. I like taking notes in class more than outside so that is one thing that I would change a little more.
13. Making sure the team chemistry worked and team members got along.
14. Mini lectures before I-RATs. I'm doing the pre-readings but thats a lot of information to still be tested on just like that
15. No suggestions.
18. To make it more beneficial we could have been graded on the material we did in class so that we would have more of a stake in the group. The only time that we worked together on graded material was the TRat.
20. I did not think the "fun bags" were necessary. They took up so much space on our desks when we already had 1000 other papers given to us. I wish he would have switched the groups up because my group was the reasons I hated TBL so much. Also, you should have waited to hand back the peer evaluations, because I felt I could not be complete honest because my group members would get the papers back and it would make things awkward.
22. Section out a portion of the class that is done individually that isn't an assessment. The TBL aspect of the class should be more for reassurance.

Identify one or two specific "things" you did to help make the TBL experience beneficial for yourself.

1. engage myself in the group
5. Came prepared to class so that I could help my group.
6. I think the TBL experience was beneficial to me because I made sure to keep up on the readings and really try to understand them.
7. Very clear with my Team and was very easy to talk and receive help, a good team that helps each other is what helped. Not being afraid to talk or disagree with the group to voice my opinion.
8. I asked questions when I or my group didn't understand something instead of doing the lazy thing and just wait for the answer
9. Keeping up with the readings was always very important
10. when team members asked questions, i always answered i always tried to check in on everyone during taps
11. I attempted to share my concerns about team members working too fast and attempted to ask questions, but this did not help. I made small talk to seem friendly, read the textbook, and mostly stayed close to people that were confused/willing to help too.
12. I made sure to contact my group members if I ever felt lost or wanted to study with someone.
13. Made sure to do the readings and homework to be able to help the team.
14. I asked my group questions when I had them. I didn't sit there being afraid I would sound dumb in front of them
15. Had constant communication with my group so when we needed help, we were able to help eachother.
18. I personally worked with my team members to formulate answers and heard their ideas. This helped me to be open to other people's ideas.
20. Read beforehand and always tried my hardest on activities.
21. I enjoyed working with my group members on the in class activities.
22. I felt that I took the lead on a lot of the activities so that I could make sure I wasn't missing out on any material. If I had let my teammates answer the questions we would have been a more well rounded group but I don't think I would have succeeded personally in the class as well as I did.

Identify one or two specific "things" you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. study more out of class
5. None.
6. The only thing that I can think of that would have made it more beneficial for me would be if I were to come up with questions on the reading before entering class, that way I could more actively be seeking to understand the concepts.
7. Try and take more notes within the reading and come to class with more questions. Coming to office hours when topics got challenging.
8. I would say read, but the book was just so damn boring and the UI was terrible and annoying so even if reading was my biggest issue I refuse to do more then I already did
9. I could have spent more times on my notes and preparing for the irat or trat
10. could have socialized more to make it less awkward
11. I could have expressed by concerns about group members with the professor, but this would only cause drama which would inhibit learning even further
12. I participated during all the activities and offered my opinion most of the time but I could have done a little better in that area.
13. Made sure to fully understand the readings before trying to explain them to others.
14. Its something small, but if you could just print out copies of the Activities for everyone. Having 3 copies, there's 2 people who are basically just watching someone and not actually learning. I understand conserving paper is important but if we recycle them later I'd think its fine
15. Not missed class.

18. I suppose that I could have gone to every single class and helped the team. I only missed like three classes but that's still three classes that the team was one man down.
20. Worried less about my group members and focused on myself because I was always trying to teach them.
21. read the pre-readings in more detail to prepare for the quizzes.
22. If I had shared my thought process when answering questions and completing activities when I felt that my teammates weren't completely on the same page, even if they hadn't said anything.

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked "Why?"

1. I would recommend this way of learning because its very beneficial and helps u remember things more
3. I did not like TBL, I feel like the class was a huge waste of time, I felt as if I was in kindergarten.
5. Yes! It was a nice way to mix it up and not have to attend a boring lecture. Very fun and effective way to learn.
6. TAKE THE TBL COURSE. I've always struggled with classes focused largely around data and mathematical interpretations but this format really helped me. The only reason I would ever point a friend in a direction away from TBL learning would be if I knew that they were the type of person who refused to do any type of learning on their own, in that case they may be better of attempting to collect as much information as they can through a non-TBL section.
7. I would ask them if they are okay doing a lot of out of class work and learning a lot on their own and gauge my response to that. I enjoyed my class time but not everyone is gonna benefit from TBL environment.
8. I would recommend it to them with the warning that its different, its not any harder but the teaching style takes a while to get used to
9. Yes i would recommend it because the learning modules are very important. I would tell them that make sure they are in a good group of students, because it is hard when people do not always prep for the i rat or t rat and it can hurt your grade in the long run
10. I would say it depends on the person. If they like going solo and learning that way, then go a non-tbl section. If they like the idea of working with other people and giving and receiving help, then go with the tbl section.
11. No you should not take a TBL class. If you want to work in groups, collaborate with those you sit near, but being forced to work with people whom you disagree with doesn't help learning
12. I would say that it depends on the type of learner they are. Going into the class I was not too excited about groups and activities but it turned out to be beneficial for me. I would say to stay but if someone prefers a more traditional class style they should probably switch out.
13. To take the TBL if they are not as confident in their skills, but non-TBL if they are excellent in statistics. TBL is great for those not very well skilled in statistics, however, those who are great may be held back by teams.
14. It depends on the person and how the best learn. If they asked me why they should I'd say because it forces you to communicate with people in your class and when you have a question at 10 pm while doing homework you can't ask your professor but you have at least 4 others that can help.
15. Yes. I find that many people learn better in group settings with team work.
16. personally TBL can be very helpful or very confusing it all depends on the prof, the HW tends to confuse students on the material rather than help so if you find new HW to give instead of the book questions the course will greatly improve
17. switch, tbl has a good idea behind it but the way it is used is not helpful for learning
18. It depends on the person. If the friend was smart and I knew that they had experience in with the material I might suggest a different section. On the other hand, if the friend had no experience (like myself), I would suggest the TBL style learning.
19. I would recommend switching classes. Ive heard from all my friends who have taken stats that their stats class was very easy and the tests were exactly based off of examples they were taught. I felt like TBL made things extremely complicated.
20. Switch to non TBL, I literally hate group aspects because it is always one person doing more than others. I hate the fact that we get graded on T-RATS because my group never listened to me and I ended up being right. It was one of the most frustrating parts of TBL. Nothing against Dykes, because he was a great professor, I just hated my group and TBL as a whole.
21. I think TBL works for some people and doesn't work for others. If they learn well independently and like to work in groups, then I would recommend it. But if they don't learn well independently and would rather not work in groups, I wouldn't suggest it.
22. I would most definitely recommend TBL classes regardless of what subject matter it is. I feel that in a day full of monotonous lectures this allows for a change of pace within the day and an escape from the normality of college classes. I felt that a stronger social aspect while learning the material is very beneficial and is a strong reflection of the real world and working in teams to achieve completion is something that everyone will need to learn to do regardless of profession so being exposed to team based work allowed experience in communicating and coming to agreements with others. I thoroughly enjoyed being in the class, even when the material learned wasn't my favorite. Professor Dykes is very passionate about what he does and truly cares about the success of his students. -Ben Austin

STA 321 01
Applied Regression Analysis
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 21/23 (91% very high)

Taught by: Bradford Dykes
Instructor Evaluated: **Bradford Dykes-Assist Prof**

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
4.0	4.5
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.4
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	21	29%	38%	24%	10%			3.9	4.4
The course content was:	21	33%	33%	29%	5%			4.0	4.3
The instructor's contribution to the course was:	21	38%	38%	10%	14%			4.2	4.6
The instructor's effectiveness in teaching the subject matter was:	21	38%	24%	29%	10%			4.0	4.5

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	21		19%	10%	43%	14%	14%		4.0
The intellectual challenge presented was:	21		38%	29%	24%	5%	5%		5.1
The amount of effort you put into this course was:	21		19%	48%	24%		10%		4.8
The amount of effort to succeed in this course was:	21		29%	33%	33%		5%		4.9
Your involvement in course (doing assignments, attending classes, etc.) was:	21	5%	29%	38%	29%				5.1

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 6.1 Hours per credit: 2 (N=21)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	5%	33%	38%	19%	5%						

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 5.2 Hours per credit: 1.7 (N=21)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	14%	43%	24%	19%							

What grade do you expect in this course?

Class median: 3.3 (N=21)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
33%	14%	5%	24%	14%	5%	5%								

In regard to your academic program, is this course best described as:

(N=21)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
48%			52%		

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	21	24%	19%	38%	19%			3.3	17
Explanations by instructor were:	21	38%	24%	29%	10%			4.0	4
Instructor's ability to present alternative explanations when needed was:	21	29%	33%	24%	10%	5%		3.9	8
Instructor's use of examples and illustrations was:	20	40%	20%	25%	15%			4.0	12
Quality of questions or problems raised by the instructor was:	21	29%	38%	19%	10%	5%		3.9	11
Student confidence in instructor's knowledge was:	21	43%	33%	14%	10%			4.3	10
Instructor's enthusiasm was:	21	52%	19%	19%	10%			4.5	2
Encouragement given students to express themselves was:	21	48%	19%	24%	10%			4.4	3
Answers to student questions were:	21	38%	24%	24%	10%	5%		4.0	9
Availability of extra help when needed was:	21	43%	24%	24%		10%		4.2	5
Use of class time was:	21	29%	33%	19%	19%			3.9	14
Instructor's interest in whether students learned was:	21	43%	29%	19%	5%	5%		4.2	6
Amount you learned in the course was:	21	33%	29%	33%		5%		3.9	7
Relevance and usefulness of course content were:	21	48%	24%	24%	5%			4.4	1
Evaluative and grading techniques (tests, papers, projects, etc.) were:	21	38%	19%	29%	5%	5%	5%	3.9	13
Reasonableness of assigned work was:	21	38%	19%	29%	10%	5%		3.9	15
Clarity of student responsibilities and requirements was:	21	38%	14%	33%	5%	10%		3.7	16

STA 321 01
Applied Regression Analysis
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 21/23 (91% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. This class challenged me to apply statistical theories to SAS output in order to answer real world questions. Additionally, learning to code in SAS challenged me intellectually.
3. It was stimulating. It helped me expand on what I had learned in other courses.
4. It did as much as it could
5. Yes. This class material was really interesting to me. Learning the different models and tests to use on data was really interesting.
6. This class was intellectually stimulating. The course notes did not always provide in depth explanations, which led to somewhat confusion on exams.
7. I liked the subject material and its usefulness in statistics, it stretched my thinking of multi variable regression.
8. I really enjoyed learning more about model building and being able to use real examples to enhance my learning as well. The concept of overfitting was new to me and I found that really intriguing.
10. Yes. Taught you ways to approach data and how to create prediction models that best fit the data you have been given.
13. This class did a great job to make sure that items from each unit were built up in order to paint an entire picture for regression.
14. I thought the material presented in class was very applicable and engaging.
15. yes. By looking at the variables/models, we can find relationships.
16. Having a lot of content helped us visualize examples from multiple different angles.
17. Yes, the questions asked on homework assignments and exams often required you to stretch your thinking and being able to apply the material you learned to different scenarios to answer them correctly.
18. Yes
19. It was, it is very relevant for me to learn regression and this class seemed to go in depth
20. Yes because the different techniques used in multiple linear regression are tedious.

What aspects of this class contributed most to your learning?

1. I appreciated changing to written homework. I feel this allowed me to use the homework as if I was preparing for an exam. The typed homework can get jumbled and confusing.
2. I liked going over the SAS notes in class. I also liked the lecture style. I really liked the homework setup towards the end of the semester a lot better than the first ones.
3. I think the material and explanations in class most contributed.
4. Lectures
5. The way the class notes were set up and how we were given a sheet telling us where to study from for each exam.
6. The ability to resubmit homework helped contribute to my learning the most. Dr. Dykes provides feedback on what we did wrong on homework, quizzes, and exams, which really helped clarify discrepancies.
7. the packets and sas code were very helpful in my learning.
8. The lecture notes and being able to redo homework without losing many points. Every time I went back and fixed hw I realized my mistakes and I was able to fix my issue before an exam. Also I really liked the weekly quizzes so that I kept up with what I needed to know without falling behind by the time the test came around.
10. Homework, exams.
11. I liked the in-class examples with the SAS output. I also liked the professor's option for resubmissions on homework. I have never had a professor offer this before and I thought it was a good idea considering most of the homework relied on SAS output which could sometimes take a while.
12. Lecture notes
13. Lecture notes and SAS handouts. Weekly quizzes are also nice to keep refreshed. Homework was great to make sure we could connect SAS to our content.
14. All of the practical example and SAS examples. Also, allowing room to grow through the homework re-submissions was helpful.
16. I enjoyed having the lecture notes to refer to.
17. I think the weekly quizzes helped me stay on top of the material and the homework assignments really helped drive home the concepts and material we learned in class.
18. the homeworks were useful in testing knowledge.

19. The information presented
20. The quizzes and some homework assignments

What aspects of this class detracted from your learning?

1. I feel the focus on the notes packets may have hindered the class. Some of the information was useful, but working through independent example problems often was more helpful for the exams.
2. The professor would sometimes get off topic and waste chunks of time.
3. None
4. Exams that were worded strangely, too many points given based on conceptual questions rather than practical applications
5. Having to redo homework questions for what seemed like simple things and never even used those things again later in the class.
6. The lack of knowing what kind of questions will be on the exam. Yes it is helpful knowing it will be multiple choice with some problem questions, but I already know that I am able to use the formula packet and calculator on the test. I felt unprepared going into all of the exams because I did not fully know what to study for my notes.
7. I think the course was rushed it felt like there was more to cover than we had time and that we couldn't slow down because we had so much to go through.
8. Not knowing what to study for quizzes and tests in the beginning. The lecture notes contain a lot of material and it was hard to just sit down and memorize it all before the test. This got better as time went on, the instructor began to give expectations on what we should know and understand the most.
10. Quizzes.
11. I did not like how heavy the multiple choice problems on the exams. For the second exam, these problems were 6 points a piece.
13. None.
14. There wasn't as many practice problems as I hoped.
16. I took this course specifically for Professor Richardson and having our professor switched was very disappointing for me. Also made the course a little unorganized and we rushed through material just to get it done.
17. Nothing specific I can think of.
18. There was a time constraint but that was because of the snow days so its not much that could have been done about that.
19. The snow week in early February
20. We never went over homework in class and also never went over quizzes or exams. It is also ridiculous that our overall grade was never updated in blackboard. We did not get an overall course grade until the class before the final. The tests were also much harder than the examples done in class as well as the quizzes. I also like the grading scale of SATISFACTORY but I feel like it was micro-graded. To explain, I was told that we would receive a satisfactory mark if it was evident that we demonstrated that we understood problems. However, this was not the case because you had to have every single problem perfect on assignments in order to receive a satisfactory. In my opinion, getting one tiny piece of a problem wrong should not make an entire assignment not satisfactory.

What suggestions do you have for improving the class?

1. Use more short-answer problems on exams. This type of problem allows students to show what they know. Small word misunderstandings can lead students to lose lots of point even if they understand the concept.
2. Do the homework like the latter ones. Actually go through the SAS on screen and ask the class questions about how to get what output.
3. None
4. Different exams
5. I like it when professors use real life examples when talking about the methods of linear regression and other things like it. Those were nice when given but more is always better.
6. Provide more in depth study guides for the exams. For studying for exams, it is helpful to know what section of the notes to study, not knowing that we can use the formula packet.
7. I think this class could be better with a mixed style of learning, the packets are great but it felt that we weren't doing the work only copying it down, maybe a way to work through the sas together and the output. I also think the formula packet was nice but limiting, some things that were not in the packet are things I would have wanted to write down for the test.
8. I really enjoy being lectured in my classes, but doing it every single day was a bit tiring. There were some parts of the notes where we as students could have brainstormed or something before just going through the answer. It's really hard though, I know, because it is a lot of material we had to learn in a short time.
9. A few times I would ask a question about the homework. Then I would record the answer accordingly and get the homework back marked wrong. It's very annoying. Please have the grading criteria in mind when I ask about the homework
10. I know that Mary's materials were used, but I'll write this if Dr. Dykes takes his own spin on the course. More homeworks! Applying the techniques we learned in the lectures to data sets was super fun and really helped me learn the material. A more project-focused approach would be interesting. While quizzes can be okay for testing knowledge, I never felt like I learned much from the quizzes. I felt like the exams were more intellectually stimulating, as they asked questions that really made sure you understood the topic being focused on. Overall, more homework/project focus and maybe quizzes every other week rather than every week.
11. Maybe not read straight from the notes and involve the class more in discussion.
12. I appreciate that there wasn't as large of a focus on numbers when it came to homework, however, I think a hybrid of homework with points and resubmittable homework would be a better approach

13. Slightly better timing with quizzes and what is lectured.
14. I would suggest giving homework or some assignment (probably not something too large) that is less guided in terms of decision making when analyzing data.
15. I like the way that Dr. Dykes grading for homework. Since we can revise homework, it helps me to understand the material. But, I think the notes we had were not written by Dr. Dykes. Therefore, I felt that the lectures were just repeating what the notes said. This made the class boring.
16. If we are behind on content, cut some out. don't try to rush through it to get it done because it's almost impossible for us to learn it if we're flying through it.
17. Possibly make it so that not so many of the questions on exams are worth so much points so that if you only miss one or two questions it doesn't lower your percentage so dramatically (especially the MC questions that you typically can't get partial credit on).
18. I actually really enjoyed this class so none.
19. None as of right now; professor Dykes did a great job adapting to the situation he accepted/was placed in given Professor Richardson's leave
20. Go over things more in class and grade more realistically. Tests should also not have multiple choice questions WORTH 6-8 points. I think its ridiculous that missing 4 multiple choice questions on an exam results in 24 points off. Doesn't make sense

STA 215 05
Intro Applied Statistics
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 10/16 (62% high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.2	4.1
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.8
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	10		30%	60%	10%			3.2	4.1
The course content was:	10		10%	80%	10%			3.0	3.8
The instructor's contribution to the course was:	10	50%	10%	30%	10%			4.5	5.2
The instructor's effectiveness in teaching the subject matter was:	10	20%	30%	30%	10%	10%		3.5	4.4

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	10		10%		40%	20%	20%	10%	3.5
The intellectual challenge presented was:	10	30%	10%	30%	30%				5.2
The amount of effort you put into this course was:	10	20%	20%	30%	20%		10%		5.2
The amount of effort to succeed in this course was:	10	10%	30%	40%	20%				5.2
Your involvement in course (doing assignments, attending classes, etc.) was:	10	20%	20%	20%	20%	20%			5.0

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 7.8 Hours per credit: 2.6 (N=9)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	11%	11%	22%	44%	11%						

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 4.0 Hours per credit: 1.3 (N=9)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
22%	22%	22%	33%								

What grade do you expect in this course?

Class median: 2.5 (N=9)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
11%		11%	11%	22%	11%	11%	11%	11%						

In regard to your academic program, is this course best described as:

(N=9)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
	67%			33%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	10	30%	20%	30%	20%			3.5	6
Explanations by instructor were:	10	10%	40%	40%	10%			3.5	7
Instructor's ability to present alternative explanations when needed was:	10	30%	20%	30%	10%	10%		3.5	8
Instructor's use of examples and illustrations was:	10	30%	20%	50%				3.5	13
Quality of questions or problems raised by the instructor was:	10	20%	20%	40%	20%			3.2	15
Student confidence in instructor's knowledge was:	10	30%	60%	10%				4.2	2
Instructor's enthusiasm was:	10	60%	30%		10%			4.7	1
Encouragement given students to express themselves was:	10	40%	10%	40%	10%			3.5	16
Answers to student questions were:	10	10%	40%	20%	20%	10%		3.5	11
Availability of extra help when needed was:	9	33%	22%	22%	22%			3.8	9
Use of class time was:	10	20%	40%	30%	10%			3.8	5
Instructor's interest in whether students learned was:	10	30%	40%	30%				4.0	3
Amount you learned in the course was:	10	20%	20%	30%	10%	20%		3.2	14
Relevance and usefulness of course content were:	10	10%	20%	30%	40%			2.8	17
Evaluative and grading techniques (tests, papers, projects, etc.) were:	10	30%	20%	50%				3.5	10
Reasonableness of assigned work was:	10	30%	20%	40%	10%			3.5	12
Clarity of student responsibilities and requirements was:	10	30%	30%	40%				3.8	4

STA 215 05
Intro Applied Statistics
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 10/16 (62% high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. It hurt my head a few times, not gonna lie
2. In general, I guess so. The class material made me think in a very different way. I'm not a person who is very interested in any topics relating to math. It's not that I'm bad at it; it just doesn't interest me at all. It took a lot of concentration to sit through the class after working all day and not being interested in the material.
3. Yes,
4. In some ways sure. It required me to flex muscles that I hadn't flexed in awhile.
5. It was more difficult than I was expecting, intellectually speaking, and it expanded slightly.
6. It did build on many principals that i already knew about, it taught me new ways to consider stats.
7. Yes. We were trying hard to put our head together contributing to the wholeteam
8. yes this class was intellectually stimulating. It is a very hard course to take in a 6 week time span.

What aspects of this class contributed most to your learning?

1. Team Based Learning
2. I'm definitely a visual learner; if you show me how to do something once, I'll remember it and understand it better. So when you would go over examples in class and explain things the book had talk about, I understood things so much better.
3. Working on problems in class as a team and helping each other
4. Relearning old stuff.
5. The team based learning.
6. doing the activities provided the best contribution to learning.
7. The team work was great. It was an extra helping hand to have, and helped me understand way better
8. What contributed most to my education was going over activities as a class vs with my group

What aspects of this class detracted from your learning?

1. N/A
2. I absolutely hated reading the book. I'm not the type of learner that can read something, understand it and then be able to put the new material in to practice without some sort of explanation. It was not beneficial for me to read the book and be expected to understand things.
4. It's not of any interest to me or my career
5. Instructors determination to have us figure it out ourselves. Helped sometimes, other times we just need a straight forward answer.
6. the length of the class
7. Nothing. Just people talking about irrelevant stuff.
8. The group work. My group barely engaged in conversation with me. Everyone basically did their own thing

What suggestions do you have for improving the class?

1. Do not take Stats in Summer unless you are good at math
2. PLEASE consider adding in a mini lecture explaining the readings. Not everyone is the type of learner where just reading without explanation is beneficial. It doesn't have to be extensive, just a little supplement to give context for the material.
3. The flow chart might have been more helpful towards the beginning of the semester rather than the end.
4. Idk...
5. Not taking it in the summer. It has too much content to be covered so shortly.
6. none
7. N/A
8. Less TBL it doesn't appeal to everyone learning style or at least make it optional for sum. It should not be required for everyone

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific “things” the instructor did to help make the TBL experience beneficial for you.

1. He explained how the process worked and he explained to ask him questions if we needed help with anything
2. Nothing.
3. helpful handouts (CI and HT examples, sections to focus on reading for RATs) allowing "cheat sheets"
4. Encouraging us to work together and moving through the problems quickly.
5. Made sure everyone participated and made the team based activities weighted more than individual.
6. the use of activities in class and group quizzes
8. I hated TBL. Not being forced to work with people who barely wanted to work with me would have been more helpful

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Helped groups with "difficult members" as to how to handle with them.
2. Again, a mini lecture would be very helpful.
3. "curve" exam grades
5. Been more hands-on in the learning. The team working together is good, but the teacher still needs far more involvement.
6. no comment
8. As mentioned above, not make it a requirement and not have grades based of TRAT's because days that I were absent from class and my group did poorly on TRAT's it impacted my grade!

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. I worked closely with members in our group that wanted to succeed in the course.
2. I tried my best to come to class prepared.
3. flashcards wrote extra explanatory notes on handouts
4. Checking answers with my teammates and relying on them to help me learn what I didn't understand.
5. Made sure to show up every day. Try to be as little dead weight as possible on the team.
6. I actually tried to be part of the group
8. I tried to engage with my group and participate in activities

Identify one or two specific “things” you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. I could have had more patience with out difficult members but that is easier said than done.
2. I wish I had had more time to read more extensively.
3. met with the team outside of class
4. Communicated with my team more frequently
5. The preparation before class
6. I could like being in groups more and could have done more participation from the beginning
8. Maybe switched groups early on, spent less time on my phone

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked “Why?”

1. I would do the TBL section because it really can help when you learn with others but keep in mind that you will have at least one member in your group who will not want to participate and will not help in anyway.
2. I wish there was a combination of the two. I think TBL can be really helpful if everyone comes knowing the material. But not everyone does, so having a bit of a lecture would help supplement the group learning.
3. I would suggest the TBL section because it's more helpful to work on the activities and example problems in class rather than at home alone.
4. Yes, because you'll be able to check your work as you move rather than being unsure and just sitting and listening to someone talk sucks.
5. It depends on the individual. If they work well in groups TBL is fantastic. But its suicide if they hate collaboration
6. I would say it didn't really help or hinder my learning of the material and it would depend on weather or not that friend learns better in a group or individual
8. I would say, If you work will in groups or are favorable of group work activities, and being graded off group work then yes take the course. It would also be beneficial to you if you like less lecture work and more figuring things out on your own. However if you learn best one on one and with lecture based classes then no.

STA 418 01, Joint with STA 518 01
Computing and Graphics with R
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 17/24 (71% very high)

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.3	3.8
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.4
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	17	18%	24%	35%	18%	6%		3.2	3.8
The course content was:	17	24%	24%	47%	6%			3.4	3.8
The instructor's contribution to the course was:	17	18%	29%	29%	12%	6%	6%	3.4	3.9
The instructor's effectiveness in teaching the subject matter was:	17	18%	18%	18%	29%	6%	12%	2.7	3.3

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median	
Do you expect your grade in this course to be:	17	6%	6%	6%	47%	24%	6%	6%	3.8	
The intellectual challenge presented was:	17	35%	18%	29%	18%				5.7	
The amount of effort you put into this course was:	17	41%	29%	29%					6.2	
The amount of effort to succeed in this course was:	17	41%	24%	35%					6.1	
Your involvement in course (doing assignments, attending classes, etc.) was:	17	29%	29%	24%	12%	6%			5.8	

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 9.8 Hours per credit: 3.2 (N=17)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
		29%	12%	6%	24%	12%	6%	6%			6%

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 6.0 Hours per credit: 2 (N=17)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
6%	24%	18%	12%	12%	18%	6%					6%

What grade do you expect in this course?

Class median: 3.6 (N=17)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
35%	24%	18%	6%			6%		6%				6%		

In regard to your academic program, is this course best described as:

(N=17)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
41%		29%	29%		

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	17	18%	41%	18%	12%	6%	6%	3.7	4
Explanations by instructor were:	17	12%	12%	24%	24%	18%	12%	2.4	16
Instructor's ability to present alternative explanations when needed was:	17	18%	29%	24%	12%	6%	12%	3.4	6
Instructor's use of examples and illustrations was:	17	18%	35%	24%	12%	6%	6%	3.6	8
Quality of questions or problems raised by the instructor was:	17	12%	24%	35%	12%	12%	6%	3.1	14
Student confidence in instructor's knowledge was:	17	41%	29%	18%	12%			4.2	5
Instructor's enthusiasm was:	17	29%	29%	41%				3.8	7
Encouragement given students to express themselves was:	17	41%	35%	12%	6%		6%	4.2	2
Answers to student questions were:	17	29%	12%	24%	12%	6%	18%	3.1	13
Availability of extra help when needed was:	17	24%	29%	24%	12%	6%	6%	3.6	9
Use of class time was:	17	18%	24%	35%	12%	12%		3.2	11
Instructor's interest in whether students learned was:	17	35%	12%	24%	24%	6%		3.4	12
Amount you learned in the course was:	17	35%	24%	24%	18%			3.9	3
Relevance and usefulness of course content were:	17	41%	29%	29%				4.2	1
Evaluative and grading techniques (tests, papers, projects, etc.) were:	17	24%	18%	18%	24%		18%	3.0	15
Reasonableness of assigned work was:	17	12%	29%	12%	29%	12%	6%	2.8	17
Clarity of student responsibilities and requirements was:	17	18%	29%	18%	12%	18%	6%	3.3	10

STA 418 01, Joint with STA 518 01
Computing and Graphics with R
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: Bradford Dykes-Assist Prof

Evaluation Delivery: Online

Evaluation Form: A3

Responses: 17/24 (71% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. The was very stimulating. I learned how to explore real data and the instructor structured the class to mimic the real world at times, so I feel like I gained a very valuable experience.
2. Yeah, it defiantly made me think and was very much problem-solving oriented.
3. Yes, learning R is a very useful skill and I'm glad I took this class!
4. Yes because this one of the few classes that teach and utilize R at GV.
5. Yes, it was a very challenging course.
6. yes, absolutely
7. The course was very intellectually stimulating
8. It was definitely stimulating and stretched my thinking because I'd never tried this language before
9. Yes; the questions posed in the earlier application tasks and the midterm projects were very difficult but useful. They required skills not learned in class, so you had to google a lot of stuff to get them done for the most part.
10. It was intellectually stimulating but professor contributed very little other than making assignments for us to do
11. Some aspects of it were. Learning the different ways to do things in R stretched my thinking in that you have to think of the best way to do things so that the code looks neat and works efficiently.
12. The course has been intellectually stimulating. My previous experience in data analysis has been with software that did not utilize programming. With programming, you have much more freedom with your analyses and visualizations. Despite not performing well in the course, I really value the experience I have gained from it, and the exposure to things such as R Studio Cloud, GitHub, R Markdown, and Shiny. At a high level, I have learned how to enter and import data, manipulate and wrangle data, create numerical summaries and stunning customizable graphical summaries, create models, write functions, and create Shiny Apps, posters, business cards, and resumes all within R.
15. Coding has always been a difficulty for me. Although I've been exposed to some of the syntax that is used, it was different for R. I would have goal in mind of what to do and not know how to accomplish it. The book was not always helpful for more challenging tasks. Therefore, I had to seek help group members and the R community which were helpful most of the time, but not always. It encouraged me to approach the tasks in different ways. This course definitely stretched my thinking for this reason.

What aspects of this class contributed most to your learning?

1. I definitely think the midterms, even though they took a lot of time and work, really helped solidify my learning.
2. The application tasks and in-class activities.
3. The team activities were for the most part quite informative and good examples to come back to during application tasks.
4. The application tasks.
5. Having to use R in every class was helpful.
6. the team activities were where I felt I learned the most R
7. code contents of data wrangling, visualization, shiny apps and animations
8. Probably the pre-class meeting prep assignments and the in class activities
9. The in-class activities were the most helpful toward learning R, since we could talk with our groupmates and the activities were mostly guided and usually provided clearer instructions than some of the other assignments.
10. Application tasks contributed to learning but were frequently difficult because there was no class lecture or instruction. Just group work
11. The thing that contributed most was the primers and the in class activities.
12. What has contributed most to my learning is Dr. Dykes himself. He is incredibly knowledgeable with the R language and how it works. When you ask him for individual help, he is very clear, concise and articulate, explaining what the code is, how it works, and why it works. I wish he would have given lectures demonstrating code for the course topics in this manner that he explains individual topics. I feel that would have better contributed to my overall learning rather than trying to teach myself the topics via online primers and the textbook. I also should note that I like the Mastery Based approach for this course because it allows for resubmission on assignments were one might have performed poorly the initial time. I think this is a metric with good validity for operationalizing learning, as one typically learns continuously over time.
13. Actually coding is definitely the best way to learn a new coding language
14. I think the Tidy Data section of the class will prove to be extremely valuable in the future. I've already used it quite a bit, and it was probably one of the only times in a stat class that we've put that much thought into how our data needs to look in order to properly analyze it. The use of git/github I think will also prove to be very valuable.

15. Working in groups throughout the entire course was helpful in addition to the professor always being available for assistance. There was always someone there to collaborate with for any questions that arose. On the midterms, it was extremely helpful to divide up the Second Midterm by "Tasks". It would have been more helpful have more direction on the first midterm.

What aspects of this class detracted from your learning?

1. Having a group that always isn't on top of it and willing to put in the work can be frustrating, especially since a lot of the class is structured around group work.
2. The complicated grading structure.
3. Some of the meeting preps were very long so I would just skip through them and not actually learn anything.
4. The in-class activities. If you are in a group with people who are great coders, they work ahead and finish the assignment before the novice ones have a chance to grasp how to do the assignment.
5. The workload was pretty heavy and stressful at times.
6. Unclear instructions
7. The enormous time needed to invest in the course. Though very profitable
8. Being in a group with others
9. Although the in-class activities were helpful in learning R, I wish we also would have some lecture from Professor Dykes because we are kind of thrown into each assignment not knowing what to do. The meeting preparations were sometimes helpful, but sometimes not helpful, and they were not adequate for learning the material. I think lecture could do some clearing up on how certain things work, rather than us just trying stuff and seeing what works but not understanding why. I also take issue with the availability of help when needed outside of class; I would often stop by office hours and he was not there, and posting an issue in Github is slow and is inefficient when talking about code that is part of a large assignment and can't be understood through a quick question post. I wish we got more one-on-one time with the professor, rather than figuring everything out ourselves (which can be good, but sometimes I need reassurance or explanations).
10. The professor did not teach at all in the class. He was willing to answer questions but sometimes it's hard to ask questions when you literally have nowhere to start with what you don't understand
11. The thing that detracted most from my learning was the teams. I don't mind working in groups for projects or activities, but my team just didn't have the best chemistry to get things going.
12. Aspects that detracted from my learning are the "teach yourself" of learning via meeting primers before class, followed by strictly group work in class.
13. Team work - some would be good, but almost all of our grades were determined based on teamwork. Because you were assigned teams, it was just the luck of the draw as to how useful your classmates were.
15. Although working in groups was beneficial, it was difficult when the group would move faster than my pace of learning and fully understanding the material. Also, having application tasks due while also being assigned midterms negatively affected my ability to complete each assignment with comprehension.

What suggestions do you have for improving the class?

1. Less busy work! Focus more on bigger assignments rather a bunch of little things to do. It was really hard to keep track of all of it.
2. I would go back to a normal percentage based grading system or modify what you have now. I know that it was designed to reduce stress but it just seemed like it made it more stressful. Maybe some sort of combination of the two?
3. Begin each class with like a 10/15 minute lecture/demonstration to show what we are learning that day. Sometimes we would just jump into a new subject and I would be confused
4. Less group assignments in class.
5. The activities completed in class are way easier than the application tasks and midterms. If the activities were more difficult so we could apply more of the knowledge we learn in class to our midterms that would be helpful. The workload was very heavy in this class. I think it would be helpful to do less but go more in-depth so that the midterms are not so time-consuming. Just making the activities gel more with the application tasks and midterm projects would be nice.
6. Make instructions for assignments more clear. I felt like I am guessing at what you want.
7. The course is well packaged with numerous interactive resources which is excellent! However, it is vital to find out major areas of difficulty and demonstrate practically in class with students.
8. Please don't continue having groups!
9. I would edit the "requirements" for getting each letter grade outlined in the syllabus. I think the levels are too restrictive, and allow for one bad grade dropping you down a couple letter grades, which I don't think accurately reflects the work put into the class. I would also like there to be some idea of what our grade is in the class throughout the class, rather than just at the end. I don't mind the mastery system, but it would be nice to have a letter grade A-F in Blackboard so I have some idea of how I'm doing. I would also either make the midterms easier, or more adequately prepare us for the difficulty of them. We did not have sufficient practice cleaning and merging data for the first midterm, nor did we have enough practice with highly complex functions utilized in the second midterm. Also, it would be helpful for the final team project to have some more clearly defined guidelines or examples of what he expects, rather than "picking a dataset and doing something with it". We didn't know what "enough" was for the team project or what one looked like, so I don't imagine being able to meet whatever expectations he has.
10. There needs to be at least some lecture in order for people to learn. Not everyone in statistics comes from a coding background so picking up a new coding language is not always easy

11. The grading scale. Mastery grading may be my favorite way for professors to grade, but in other classes each grade of E or S or anything else counted as a percent to that section of grades, then you needed a certain percent in each section. So theoretically you could get a bunch of E's for the application task and that would make your percent really high for those, and then one P in application tasks wouldn't affect your grade like it would for the scale that was used in this class. I specifically do not like how I could have really good grades in everything and be lined up for an A, and then if I get an S on the final GROUP project it lowers my grade all the way to a B+, not even just an A-, and there are no revisions on it since it is at the end of the semester. Maybe another group project in the middle of the semester that can be revised to get the E for the A requirement would fix this? It is hard to be near perfect the first try on something that is graded with judgement rather than an exam that has definitive answers.

12. I do have some suggestions for improving the course. This response may jeopardize my anonymity; however, for the sake of posterity, I feel that it is completely worth it. I am a first year student in the Biostatistics Master's program, with no real previous experience with programming. This course is not tailored nicely for someone teaching themselves a programming language for the first time, as one "teaches themselves" the topics before class via primers and the book. In the circumstance you have no prior knowledge of programming, learning something completely foreign in this way can be difficult. Sometimes I would do the meeting preparations but not quite fully grasp the concepts, then I get to class and work in group projects on assignments related to the topics reviewed before class. As a new and weak programmer working in groups with much stronger and more experienced programmers, I found that I by the time I got halfway through a problem, a group member would have already finished the question, and pushed it to GitHub. To avoid constantly only getting halfway through problems and not reinforcing the topics properly, I would go back and try to do the assignments again individually outside of class, but this can still be confusing and time consuming. I assume most students taking the class came from Statistics or Computer Science backgrounds, where they had already had heavy exposure to programming; students of this criteria likely had a better experience and were much more successful in the course. To help students with weaker programming backgrounds, I would suggest Dr. Dykes to show some of the topics in class as a lecture demonstration, before the students start working on the group assignments; I feel that this would add clarity, greater opportunities for learning, and promote collaboration between groups as opposed to only within groups.

13. Because all of class time is spent working on coding individually or as a team, the professor didn't really add anything to the class. I felt like I could have shown up to class once a month and gotten the same amount of information I did attending class every week. This class might be best as an online course - due to the nature of the course, the professor has to spend a lot of time grading but no time whatsoever lecturing.

14. I'm not sure how feasible it would be, but I think getting to shiny apps/websites/blogs a bit sooner in the course would've been great.

15. It would be helpful to not assign Application tasks at the same rate when midterms are assigned/due. Also, possibly creating the Activities in such a way that each group member would have to contribute to each exercise to ensure each person has the opportunity to practice the different skills. Lastly, having "Tasks" on each midterm.

STA 215 37
Intro Applied Statistics
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 29/30 (97% very high)

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.5	3.8
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 4.9
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	29	21%	31%	31%	14%	3%		3.6	3.8
The course content was:	29	28%	21%	28%	24%			3.4	3.7
The instructor's contribution to the course was:	29	31%	24%	28%	10%	3%	3%	3.7	3.9
The instructor's effectiveness in teaching the subject matter was:	29	31%	17%	24%	21%	3%	3%	3.4	3.6

STUDENT ENGAGEMENT

	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Relative to other college courses you have taken:									
Do you expect your grade in this course to be:	29	17%	24%	17%	24%	14%		3%	5.0
The intellectual challenge presented was:	29	14%	34%	24%	24%	3%			5.4
The amount of effort you put into this course was:	29	7%	48%	24%	10%	7%	3%		5.6
The amount of effort to succeed in this course was:	29	21%	41%	14%	24%				5.8
Your involvement in course (doing assignments, attending classes, etc.) was:	29	24%	38%	21%	7%	7%	3%		5.8

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 4.6 Hours per credit: 1.5 (N=29)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
	24%	48%	21%		3%		3%				

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 3.3 Hours per credit: 1.1 (N=29)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
10%	45%	28%	14%	3%							

What grade do you expect in this course?

Class median: 3.4 (N=29)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
31%	17%	14%	17%	10%	7%			3%						

In regard to your academic program, is this course best described as:

(N=29)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
24%	41%			34%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	29	41%	21%	31%	7%			4.1	3
Explanations by instructor were:	29	21%	38%	24%	17%			3.7	14
Instructor's ability to present alternative explanations when needed was:	29	38%	17%	31%	14%			3.8	13
Instructor's use of examples and illustrations was:	29	45%	21%	21%	14%			4.2	4
Quality of questions or problems raised by the instructor was:	29	41%	17%	34%	7%			4.0	9
Student confidence in instructor's knowledge was:	29	48%	21%	21%	7%		3%	4.4	6
Instructor's enthusiasm was:	29	52%	21%	7%	21%			4.5	2
Encouragement given students to express themselves was:	29	38%	28%	14%	14%	3%	3%	4.1	15
Answers to student questions were:	29	38%	24%	28%	10%			4.0	10
Availability of extra help when needed was:	29	41%	34%	17%	3%	3%		4.2	5
Use of class time was:	29	31%	28%	24%	14%		3%	3.8	16
Instructor's interest in whether students learned was:	29	45%	21%	24%	3%	7%		4.2	7
Amount you learned in the course was:	29	28%	34%	28%	3%		7%	3.9	12
Relevance and usefulness of course content were:	29	28%	21%	38%	7%	3%	3%	3.5	17
Evaluative and grading techniques (tests, papers, projects, etc.) were:	29	34%	34%	21%	10%			4.0	8
Reasonableness of assigned work was:	28	36%	29%	21%	14%			4.0	11
Clarity of student responsibilities and requirements was:	29	55%	17%	17%	10%			4.6	1

STA 215 37

Intro Applied Statistics

Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online

Evaluation Form: A3

Responses: 29/30 (97% very high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. Kind of, math is easy for me so im not a good example
2. No, the class was not intellectually stimulating because I do not enjoy statistics and I did not feel like the time spent in the course was very useful.
3. I learned a lot in this class and I feel confident in almost everything I learned. Math has never been a favored subject for me, but this was my favorite class this semester, it had challenging content but with the class activities, professor explanations, and team based learning the concepts became very clear and useful.
4. Yes this class did stretch my thinking a lot. Before I took this class I was not really sure what a statistics class was like. I know I will use what I learned in this class in my everyday life as well as in my future career. I found the class interesting
5. In some ways. The concept of statistics was stimulating.
6. not really, this was just another class i had to take, nothing more
7. Yes, you had to be able to read from the book and interpret and understand it enough to do well on irats/trats.
8. Yes, using the activities made you think
10. yes it made me think differently since we were in a group I had to think with a team which was different
11. Yes, it introduced statistics in many real-world scenarios and problems.
12. This class was difficult for me because I normally struggle with math related topics but this has been really beneficial
13. The class was set up in a unique way that made me put a lot of work in out of class to make sure that I did good in the class. It made me stretch my way of thinking because it was a different way of learning. Im used to a lecture type class and this was the complete opposite. It took me a lot more work to get a good grade.
14. Yes much more difficult then expected
15. Yes, I never had stats and was used to calc and algebra so this stretched my thinking.
16. Yes, I learned a whole new way of thinking and problem solving in this class.
17. Yes, it made me stretch my thinking. It was very challenging.
18. Yes. The way the information was taught definitely took some getting used to but it did seem effective
20. to some point it did but not always
21. This class was intellectually stimulating for me and stretched my thinking towards more statistical thinking than analytical thinking.
22. This class was intellectually stimulating because I am constantly challenged to learn new aspects of statistics
23. I do not think this class was stimulating because I do not enjoy learning stats or math. I do feel if I was not confused all the time I would be able to enjoy it more because I would know what to do. This class all depends on your group or not. IF your group is stimulating and understands then you are better off. But if you do not have a situation like this, then you are way more likely to be less stimulated and more confused.
24. The class taught me many new ideas and ways to solve problems. The class was helpful overall.
25. This class really was challenging and made you take the topics discussed in class or in the book and think about "why" they work that way.
26. This class was intellectually stimulating because it forced me to think more statistically and with reasoning then just looking at numbers and trying to solve problems. It helped me to really understand when statistics is used in real life and how it can be pertained to the future and career that I see for myself.
27. The structure of the class with the TBL made it so that the course content was applied to real life scenarios within the learning modules, so we were always thinking not just about how to do a hypothesis test but applying it to an example experiment.
28. The class did expand my knowledge of statistics and taught me how to use new data analyzing tools such as SPSS.

What aspects of this class contributed most to your learning?

1. The team aspects of the tbl learning
2. The aspect of the class that contributed most to my learning was the homework.
3. professors enthusiasm and availability to help if needed, team based learning, the class activities, and the homework all contributed to my learning.
4. The team based learning, reviewing the activities later that we did together, and content applications helped me learn a lot. Because we used TBL I felt a lot more confident about the material because I got to talk to other people about it and learn the material in a way that was different from my other classes. Also the organization and structure of the class helped me a lot. I was told exactly what I had to know and do, the structure/organization made sense and definitely contributed to my learning
5. SPSS and reading data

6. when he would actually walk us through how to do problems rather than have us read about it
7. The class activities
8. Going through the activities within your group
9. The TBLs helped my learning the most, it was presented in a way that you can understand what the reading was about because the readings were confusing and sometimes too much information to condense/ understand.
10. I liked the TAP the most I think they helped me a lot
11. The team aspect of the class helped me check my work and learn from/teach others when I or one of my teammates was stuck on a concept.
12. I really liked the team based learning. It was nice to be comfortable with my peers so I could ask questions
13. I would say that the in class activities helped me the most because it allowed me to collaborate with others on how to complete the problems and it allowed me to ask questions to the professor.
14. When you would explain stuff it was much easier to learn from you then the book.
15. The readings outside of class
16. group activities
17. The homework assignments he would assign after we completed a learning module.
18. The CAPs in class were key to understanding the information and studying for exams
20. the homework given contributed most to my learning
21. What aspects contributed most were the in class group activities that were working together to figure out the concepts.
22. The i-rats and t-rats
23. I would say working by myself and then seeing the professors answers helped me the most. I was able to understand exactly what I did wrong and how to correct it.
24. The team aspect of the class greatly helped the way I learned and the successfulness of my learning.
25. The team-based aspect really was beneficial as it gave me the opportunity to lead my group discussions and take charge and gave me a sense of responsibility for my own learning and the group's.
26. The aspects of this class that contributed most to my learning was having a great group to work with that all did their part to be prepared for class and helped me to understand topics I didn't understand. Also, the in class activities were very helpful as well.
27. Being in a team and having people help you with questions at the time you have them was very valuable.
28. I really liked the team aspect of this course it helped me to easily work well with others.

What aspects of this class detracted from your learning?

1. I didn't think the instructor did a very good job at answering questions
2. The aspects of the class that distracted me from my learning were team-based learning. I did not feel like it was efficient and I would have preferred a different teaching style.
3. couple of my team members did not contribute to team based learning, but overall still didn't let it distract my learning.
4. The team based learning also sometimes took away from my learning on occasion. Sometimes my group would not all communicate with each other in class and on days like those I didn't understand the information we went over as well.
5. Team based learning. I feel like I didn't absorb the material the as well. Other students would go through and do the work. If I was confused I would ask questions and the students would try to explain it. However, they're students so it wouldn't make the most sense to me. It eventually became very discouraging and I lost my interest in learning stats. I eventually just hoped to pass the class.
6. team based learning
7. doing the irats and trats before we did the activities. Trying to understand such hard content and then being judged on how well you understood it just from reading was challenging and does not make sense
8. A lot of down time in between each stopping period in activities but the down time wasn't enough to get homework down. also teaching myself before class was a little detracting because I didn't know if I was prepared enough for the I rat and t-rat.
10. some of the CAP's were not useful in my opinion and seemed redundant
11. Doing the same kind of activities throughout the semester allowed for people to sometimes not pay attention or not go along with the class during assignments.
12. sometimes i got easily distracted in class and was not on task
13. I would say that sometimes it was hard to stay on task in class due to me building relationships with everyone in my group so sometimes we would have conversations that were unrelated to class material. This is not the professors fault, its just the fact that we always worked in groups and that always leads to other distractions.
14. I think I just struggled with the team based learning and having to read before class
15. In class activities and no lecturing
16. nothing
17. It being a 50 minute class, three days a week.
18. Sometimes the exams felt like they were trying to trick me up which doesn't seem right for a core class
20. being bored in class
21. I did not feel any aspects detracted from my learning.

22. none
23. There was always talking in the classroom because everyone was in groups. it makes it easier for the talkers but harder for the students who may need a little more quiet to be able to understand. Also, It would be different if we worked in groups maybe once or twice a week but every time we meet we worked in our groups.
24. Doing everything online sometimes became a distraction.
25. NA
26. The aspects that detracted from my learning were trying to understand the text in the book for the readings at times, but it was easy enough to ask questions within my group and have someone help me that did understand that aspect of the material.
27. Being tested on material before you even really know it
28. None

What suggestions do you have for improving the class?

1. none, keep the tbl going
2. I believe I would have received more out of this course if it were not team-based learning. I don't feel like the students should be teaching each other, I feel like that is the professor's job.
3. N/A best class
5. Offer lectures and more explanations to students. Team based learning itself isn't that bad. However, team based learning shouldn't be the only form of learning in the class.
6. less tbl, more teaching
7. I do not mind the team based learning but a girl from another group from mine reached out to me because she noticed I was doing well in the class and she was struggling because she was being excluded from her group and was not learning anything in the class. I think there should be more peer evaluations and something in place to avoid that. I feel like if you are stuck with a bad group than you are screwed for the class.
8. Maybe have a notes day before the start of a chapter so we all understand what we need to know for sure before taking the l-rat and t-rat
9. The content application weren't really helpful. I never really learned anything from them. They just felt like busy work to me.
10. I think that maybe fewer caps would be helpful because they seemed like busy work
11. Try to find different activities, or maybe using collected class data like student's height for activities.
12. I liked how the class was run. I feel like a little bit more explanation over certain topics would be helpful, but overall a good course
13. I would suggest to do a little bit more teaching of the class material. I say this because for a lot of the classes I would be very confused on some of the work that I was completing and everyone in my group would feel the same way.
14. I think the team based learning is difficult when half your group members never show up and are zero help.
15. Take out the T-rats
16. I feel like I've taught myself all the material in this course. I wish I had learned some of it from the professor.
17. Having the professor teach more hands on with assignments, rather than everything online.
18. Maybe lighten up a little bit and not take things so serious all the time. It's a core class so it would've been nice to have been able to have fun in it since I don't think I'll use a lot of the stuff I learned in class in the future but I did learn a lot and the professor was very good at teaching the material
20. less content application they are pointless to me and better stuff to do in class the activities done in class don't teach me anything
21. I suggest a little bit more in class explanations added on to the activities.
22. none
23. I would suggest for the professor to maybe teach only more advanced stats classes and/or lecturing more and using the groups as a helper to his teaching and not vice versa.
24. The class was pretty good overall and I wouldn't change anything about the way it is taught.
25. I don't really have any suggestions for the class, I think TBL works really well for the class.
26. Some suggestions I have for improving the class include maybe having a topic list to go through and make sure we understand fully what topics are on each exam. It might be helpful when exams have to be pushed back past new material and because I know I had a very hectic schedule this year and others do as well, so I know that would help to study from when we have other classes like chemistry and physiology to study for as well. It would help with organization as well, even though organization is not bad.
27. I think the RAT process should be split into a TRAT being at start of a LM and an IRAT to finish a LM because that way you're being introduced to the material with the help of your team but then also being tested on how well you know it once you've actually learned it
28. Since I was in the 50 minute course, there wasn't really enough time to complete the exams effectively. I think other students felt this way as well but there seemed to be too many questions for that amount of time and I felt rushed.

INSTRUCTOR-ADDED OPEN-ENDED QUESTIONS

Identify one or two specific "things" you could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. I thought the TBL was great, no complaints there
2. I could have read the book more when subjects were not clear

3. I really enjoyed the TBL and was very effective for me. There was some unbalanced team members from one whom took too much control to others who were kind of disconnected from the activities. I was neutral and I feel like I could have tried to do something to level out the contribution and try to be more inclusive, but also can only do so much if those members are not willing to meet you half way.
4. nothing
5. I could have gone to office hours
6. been more communicative
7. Spoken up against the group member that was controlling the activities and answering the questions without us talking about it. Not be afraid to change or bring up a wrong answer that someone in the group put even though I knew it was wrong.
8. A lecture before a chapter to get a base understanding from the professor.
9. Be more willing to ask my group for help. I was confused a lot because they would go so fast so I never felt like I understood a lot of what was happening, but I was too embarrassed to ask them when I was confused.
10. I think that maybe groups could be made on the first day of class or people could email you prior to class if they know of certain people in the class that would want to be in the same group with each other. Also, I don't think that it told us it was a team-based learning course when we signed up because that would have been nice to know, not that I would have changed out of the class because of it, but it would have been nice to know. Also, disregard that last statement if we knew and I'm just dumb and didn't see it
11. I think sometimes the team was distracted so I could have done a better job of staying focused or making sure that everyone got a chance to participate in team activities.
12. I could have been a more active team member instead of being distracted in class
13. One thing that I could have done better was reading more of the book before coming into class because I slacked on that a little bit. Another thing that I could have done better was stay focused in class because I would always get off task when completing the in class material.
14. Read the assigned readings prior to class
15. meet with group outside of class
16. Asked more questions when I was confused and met up outside of class more
17. Have a better relationship with my teammates.
18. Maybe read the chapters before the I/T RATs more carefully
20. I could have done all of the content applications
21. I think that working more with more group outside of class could have been beneficial.
22. + I could have read more thoroughly + I could have utilized my group's help more
23. I could have made my group members listen to me more. Even though I missed minimal class maybe try not to miss any at all.
24. To make the TBL better I could have read a little bit more throughout the semester.
25. I think that I should've been more diligent with my readings between classes to better assist my team.
26. One thing that I could have done to help make the TBL experience more beneficial for me is to make time to meet up with my group more outside of the classroom to study topics. Another thing that could have been beneficial is to not procrastinate on filling out my blank sheet and studying for the exam.
27. Attendance, coming to class more prepared to help my team
28. I think that we should have more time to go over questions about the readings before I-RATs and T-RATs are given.

Identify one or two specific “things” you did to help make the TBL experience beneficial for yourself.

1. I did a significant amount of the work, and took leadership during class
2. I asked questions to my partners
3. I was at class, organized and ready to learn, I talked through the activities and contributed to finding the answer.
4. I prepared before class activities and tests, I relied on my group members as well
5. Look back on TBL learning for help during the homework.
6. stayed on topic as we worked as a team
7. I did all of the pre and post readings and used them in the activities. My group was able to consult back to my well taken notes when needed.
8. Using the activities from the TBL gave me a better understanding of the material.
9. I took it at my own pace, even if the group was ahead, I was able to read through the information and understand how they got the answer that they did.
10. I made sure I did the readings outside of class so I could come into class prepared. Being in a team-based learning class forced me to actually do the readings because I felt that if I didn't I would have let my team down.
11. I talked with my team quite often about issues that we had with the class or if anyone needed help understanding something.
12. staying on task in class would help me be a better team member
13. One thing that I did good with TBL is the fact that I was always the person in the class to ask the question. I think that a lot of the questions that I asked benefited many other people in the class other than me. Also I was a very good team based learner due to me always being willing to help others out.
14. Wrote notes in our in class assignments for everyone.
15. reading
16. Made a group chat so we could help each other outside of class and met up to study for exams

17. I was not a fan of TBL. I would've liked to learn more hands-on rather than everything being online. It is much easier to learn when you are able to write on activities and assignments rather than highlighting information online. You actually remember easier when you take notes with a pen and paper rather than typing on a laptop. I wish I had joined a different class that did not offer TBL.
18. Doing the CAPs and homework
19. Met with group outside of class
20. I made sure when doing the homework I learned all that I could from it
21. I worked and communicated well with my group and equally shared our ideas.
22. + I asked for help sometimes from my group members + I used my group to compare answers and get a better understanding of why my answer might have been wrong
23. I reached out to another girl in my class who has an A. I also worked with a math major and stats minor students to get further help. I also meet the professor for office hours a few times. I had to start working separately because my group was not willing to slow down for me at all.
24. By creating a chat with our group it allowed us to communicate at any time when working on homework and other problems.
25. I always did my Pre-RAT readings to ensure that I was able to help in our T-RATs.
26. One thing that I did do was I understood the reading and and engaged in discussions with my teammates to make sure we learn the material and that everyone fully understands and is on the same page.
27. Preparing for IRATs made knowing answers throughout the LM easier
28. My group did outside study groups before exams which were extremely beneficial to my success.

Identify one or two specific “things” the instructor did to help make the TBL experience beneficial for you.

1. he put me in a good group I guess
2. The instructor went over answers after every activity that cleared up the confusion
3. Instructor was available and very willing to help with all questions and concerns, as well as chose on all teams in an equal manner during activities.
4. he kept the whole process organized and fun
5. Give the correct answers for TBL
6. gave us stop points so that he could go over what we are working on
7. Broke the class activities in sections and went over them in sections.
8. Breaking the TBL down and going through it made it more beneficial because if the group was confused he would go over the question and explain it anyway.
9. He was always willing to answer my questions when I had them about the TBL and I liked that the class was consistent with the TBLs. And If you missed class, it didnt mean you were behind because you always have the information on the computer.
10. I liked the i-rat and t-rat I think it really helped me learn the material.
11. The TRATs were beneficial because it allowed my team to talk through the problems and gain a better understanding of the content that was being asked in the problem.
12. the instructor made sure team members were all included in activities
13. I think the professor was always willing to help the students out with any questions they had and he was always a very friendly guy. He made sure that all of the students were involved in class and that was very helpful for the class as a whole. Overall very good guy.
14. Only when you would explain stuff
15. answered our questions
16. gave us time in class to work together and TRATs
17. Made it easy to keep track of all activities online.
18. He explained the answers in a clear and easily understandable way
20. He created good homework problems to teach us
21. He encouraged our group work and helped individual groups when necessary.
22. + Actually made us work in groups every class + Randomly assigned the groups
23. He did nothing to help the tbl experience for me. I believed I asked him if it was possible to post the group class work a little earlier so I could understand more. I believe he did it once or twice after I asked.
24. The TBL has team tests which were greatly beneficial to me.
25. Professor Dykes was great at explaining topics in understandable ways both in front of the entire class and also within individual groups.
26. One thing that the professor did to help male the TBL experience beneficial was he would go through the in class activities once we were finished and gave students the chance to ask questions if they were confused. Another thing he did is when he was going over the in-class activities, and asked students why they believed their answer was correct.
27. Putting us in groups at random that we stuck with throughout the semester helped build a good team bond
28. If certain aspects of the reading were unclear our professor did well in explaining where the misunderstanding was.

Identify one or two specific “things” the instructor could have done (either better or at all) which would have helped make the TBL experience more beneficial for you.

1. Again no complaints

2. The instructor could have spent more time teaching in front of the class
3. N/A Instructor gave us notice that he was young and still new, however that made no difference he was a better instructor then many I've had who have been teaching much longer. Was a great professor and cant think of anything to make this course better at the moment. Was my favorite class.
4. nothing
5. Explain the material before having us do the work.
6. taught us more rather than having us read and then work as a team on it
7. Had more lectures are go over more confusing topics beofore or after irats/trats. Be more attentive when it comes to the group chemistry because some groups left people out.
8. I didn't like having to read and teach myself the lesson before hand, but regarding class time I can see that being difficult. I suggest before every new chapter do a small lecture to get everyone on the same page.
10. I wish we got back the i-rat and t-rats so we could reread the question and look them over
11. Not take off two points if the correct answer was your second choice. Also, better seating arrangements for the teams should happen, our team often felt cut off from one another especially when we were in the classroom with the pop-up computers blocking off one or two of the group members.
12. in think the instructor could have done a little bit more lecture time for the students, but otherwise they are doing well
13. I think that the professor could have explained some of the material in class better because me and my group were confused on some of the assignments that we were completing in class.
14. Spent some days lecturing and other days allowed us to work on team assignments
15. lectured
16. put the desks face to face so we could actually work in our groups.
17. Have activities and work through problems on paper as he lectured during class time. Professor Dykes was a very intelligent and nice man. I just wished I had joined a Non-TBL section.
18. No IRATs
20. The in class activities did not teach me anything
21. I think the course was approached correctly and I can't think of any specific aspects that need working on from the professor. If changes were necessary I feel they would be more from the student side.
22. I think that the TBL experience as it was, was the most beneficial model for me.
23. The instructor could have came and checked on our group more since he knew our group really had issues and it was affecting some of our learning. It really just seemed like we were alone.
24. The instrutor did a good job throughout the semester on the TBL and I don't think there is anything that could have done been better for a more beneficial experience.
25. NA
26. One thing the professor could have done to help make the experience better and more beneficial is by just providing more organized study guides or material on the topics to understand and maybe tables/diagrams to understand the difference between all the different letters and symbols used.
27. I cannot think of any at the moment
28. As I've mentioned before, I felt overwhelmed when it came to the I-RATs and T-RATs because it was based on my ability to comprehend the readings. I would liked to have had time to go over them with my professor so I could make sure I had the right idea. I feel like if I hadn't come in with knowledge from my high school AP Stats course, I probably would have been very confused in this course.

A friend is taking STA 216 next term & wants a section on certain days/at a particular time. The friend learns the section is being taught using TBL; knowing you have experienced TBL, the friend asks your advice on whether to remain in the section or switch to a different same days/time section. Regardless of who the TBL-section instructor is, would you recommend your friend take the TBL section or switch to a non-TBL section? What justification would you offer if you are asked "Why?"

1. Take the TBL section, it helps enhance your learning when you all work together, especially if you have to help your group members
2. No, I would recommend that the friend switches to a non-TBL class because I felt like I could have gained more knowledge with a traditional teaching style class.
3. I would definitely recommend my friend for TBL because it gives a more effective hands on learning experience that's not just a lecture. It gives you the opportunity to work with classmates and understand the content better and gives a more comfortable space in a small group to ask questions/concerns.
4. I would always recommend TBL to anyone taking stats, it helped me learn so much and I could imagine the class any other way,
5. No, I felt like I didn't get enough help. My friends who weren't in TBL classes understood the material better and felt more confident in the class.
6. i would recommend not doing the tbl class, i personally like just being taught better rather than having everything we do be with a group
7. For me, I benefitted from TBL because my group had good chemistry however I know that not everyone did and they struggled so ldk if I would recommend it because you never know if you are going to get a good group.
8. I would recommend the TBL course if the student didn't mind teaching themselves the chapter before we did any activities or class work.
9. I liked the TBL becasue you always have the information, so even if you are confused in class, you can usually go back and figure out how your group got the correct answer, and if you have a good group, they can explain the information to you.
10. I would tell my friend that if she is a more visual learner and likes to talk things out with others that I would recommend it because that is how I am and I like things hands-on. I think that that is why I am doing god and like this class so much.
11. I would say take the TBL section because it allows you to have a team that you can work with and get help from if need be, whereas a normal stats class you might not get that easily accessible help.

12. I would tell them to take the tbl course because I am more of a social person and doing team work in class helped me understand a lot better
13. I would say that they should base it off the person that they are. If they are good at teaching themselves and like to read then I would say TBL is for them. If they are not a good team person and they hate reading outside of class, I would say that TBL is not for them. It all depends on what kind of learner they are.
14. Honestly it depends on their learning style because I really struggled and I think I would have a better grade in the course if I would have been taught the material lecture style.
15. non-tbl because there is no lecturing and the in class assignments do not get us anywhere
16. I would suggest they take it. It was a good learning experience and it felt good knowing that I had people in the class that I could go to for help.
17. Non-TBL section. I mentioned it above and I believe that it did not help me at all. Yes, we had teammates that we could rely on for answers, but in my opinion it ruined the class for me. Again, I would've rather taken a Non-TBL section because I am more hands-on and would've liked to sit in a lecture and take notes instead. It was hard because we would do everything online and when it came to the homework assignments they were much more dynamic and confusing.
18. I would recommend it. It does help with the CAPs and homeworks even if it means more responsibility for your grade in the end
19. No I would not recommend TBL for my personal way or learning I work better with a teacher lecturing not having a group to depend on for learning. A bad thing about groups is if people in a group aren't willing to help understand content it could affect your learning.
20. I think that with TBL you are able to get points easily but its all very self taught and in class work and content applications were not helpful
21. I would suggest taking the class 100%. I honestly wish every class was taught with this method because it allows for different view points to help each other out. Also, I feel that it is a better way of teaching the material because it forces students to figure out the information to a level where they understand it and not where they are just memorizing what the professor said.
22. I would more than likely recommend TBL because I believe it really helped my understanding of the course material. I justify this response with the fact that I usually have no idea what's going on after reading the chapters, but by working with my team through the TAPs, I usually get a grasp on what I'm supposed to be doing, and I can do it correctly.
23. I would advice her to switch out depending on the person because a lot of people struggle with math and stats so the extra noise makes it really hard.
24. I would recomend TBL it makes learning much easier as it's done as a group as well as providing constant help from peers on areas you may struggle with.
25. I would recommend the TBL section because it lets you learn at your own pace and rewards the people that understand the chapter with additional in-class time to work on homework assignments.
26. I would recommend them to stay in the TBL section. My reasoning would be that it helped me to have people to go over homework with and help me to understand the material when I felt lost. I would be a little worried about recommending them to stay in it just because some are not as lucky and may be with a team that is not as helpful or runs the entire thing without making sure they are understanding. Personally though, I would recommend it because I had a great group which made the learning easier and understandable.
27. I would highly recommend TBL because of the instant feedback working with a team brings. The LMs made the course material easier to understand for me.
28. I feel like there are pros and cons to TBL and non-TBL for sure. I personally had a great experience with TBL this semester but I feel like the people in the group makes a huge difference. Everyone in my group were very hard workers and we were all willing to help one another which made the experience great. I would recommend TBL to others and I would take it again myself but I know that everyone learns differently so it really depends on your learning style.

STA 418 02, Joint with STA 518 02
Computing and Graphics with R
Course type: Face-to-Face

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 16/24 (67% high)

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Overall Summative Rating represents the combined responses of students to the four global summative items and is presented to provide an overall index of the class's quality:

Combined Median	Adjusted Combined Median
3.8	4.3
(0=lowest; 5=highest)	

Challenge and Engagement Index (CEI) combines student responses to several *IASystem* items relating to how academically challenging students found the course to be and how engaged they were:

CEI: 5.7
(1=lowest; 7=highest)

SUMMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Adjusted Median
The course as a whole was:	16	12%	56%	19%	6%	6%		3.8	4.3
The course content was:	16	31%	44%	19%	6%			4.1	4.4
The instructor's contribution to the course was:	16	25%	31%	19%	12%	12%		3.7	4.1
The instructor's effectiveness in teaching the subject matter was:	16	19%	38%	19%	12%	6%	6%	3.7	4.2

STUDENT ENGAGEMENT

Relative to other college courses you have taken:	N	Much Higher (7)	(6)	(5)	Average (4)	(3)	(2)	Much Lower (1)	Median
Do you expect your grade in this course to be:	16	12%	12%	6%	50%	19%			4.1
The intellectual challenge presented was:	16	38%	25%	31%	6%				6.0
The amount of effort you put into this course was:	16	56%	25%	12%	6%				6.6
The amount of effort to succeed in this course was:	16	38%	38%	12%	12%				6.2
Your involvement in course (doing assignments, attending classes, etc.) was:	16	44%	19%	19%	12%	6%			6.2

On average, how many hours per week have you spent on this course, including attending classes, doing readings, reviewing notes, writing papers and any other course related work?

Class median: 11.5 Hours per credit: 3.8 (N=16)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
		6%	19%	19%	6%	31%			12%	6%	

From the total average hours above, how many do you consider were valuable in advancing your education?

Class median: 6.5 Hours per credit: 2.2 (N=16)

Under 2	2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-17	18-19	20-21	22 or more
6%	12%	25%	12%	6%	6%	25%		6%			

What grade do you expect in this course?

Class median: 3.8 (N=16)

A (3.9-4.0)	A- (3.5-3.8)	B+ (3.2-3.4)	B (2.9-3.1)	B- (2.5-2.8)	C+ (2.2-2.4)	C (1.9-2.1)	C- (1.5-1.8)	D+ (1.2-1.4)	D (0.9-1.1)	D- (0.7-0.8)	E (0.0)	Pass	Credit	No Credit
50%	12%	6%	25%	6%										

In regard to your academic program, is this course best described as:

(N=16)

In your major	A core/distribution requirement	An elective	In your minor	A program requirement	Other
75%	6%	6%		12%	

STANDARD FORMATIVE ITEMS

	N	Excellent (5)	Very Good (4)	Good (3)	Fair (2)	Poor (1)	Very Poor (0)	Median	Relative Rank
Course organization was:	16	12%	50%	12%	19%	6%		3.8	5
Explanations by instructor were:	16	6%	44%	19%	25%	6%		3.5	9
Instructor's ability to present alternative explanations when needed was:	16	12%	50%	19%		19%		3.8	6
Instructor's use of examples and illustrations was:	16	6%	31%	38%	12%	12%		3.2	16
Quality of questions or problems raised by the instructor was:	16	12%	25%	56%			6%	3.3	14
Student confidence in instructor's knowledge was:	16	25%	44%	25%		6%		3.9	11
Instructor's enthusiasm was:	16	50%	31%	12%	6%			4.5	3
Encouragement given students to express themselves was:	16	50%	38%	12%				4.5	1
Answers to student questions were:	16	19%	25%	31%	12%	12%		3.3	13
Availability of extra help when needed was:	16	31%	31%	25%	12%			3.9	7
Use of class time was:	16	31%	19%	25%	19%		6%	3.5	12
Instructor's interest in whether students learned was:	16	25%	38%	31%	6%			3.8	10
Amount you learned in the course was:	16	31%	44%	19%		6%		4.1	4
Relevance and usefulness of course content were:	16	44%	31%	19%		6%		4.3	2
Evaluative and grading techniques (tests, papers, projects, etc.) were:	16	31%	25%	25%	12%		6%	3.8	8
Reasonableness of assigned work was:	16	6%	19%	44%	12%	12%	6%	2.9	17
Clarity of student responsibilities and requirements was:	16	6%	31%	31%	19%	12%		3.1	15

STA 418 02, Joint with STA 518 02
Computing and Graphics with R
Course type: Face-to-Face

Taught by: Bradford Dykes

Instructor Evaluated: **Bradford Dykes-Assist Prof**

Evaluation Delivery: Online
Evaluation Form: A3
Responses: 16/24 (67% high)

STANDARD OPEN-ENDED QUESTIONS

Was this class intellectually stimulating? Did it stretch your thinking? Why or why not?

1. The class content was very intellectually stimulating. It presented a challenge and covered many useful and interesting topics.
3. This class stretched my thinking by pushing me to solve problems in a new language. Beyond learning R, we practiced collaboration and learned to use tools like GitHub. Learning R in this context made me feel like I was learning it in its most powerful and realistic form. Now I have an idea of its strengths and weaknesses and could use effectively it in a workplace scenario as I see fit. I am very glad to have it in my data science toolkit.
4. It did in that it was a coding language that I have never used before. Also, the midterms and final were very challenging which required a lot of thought and research into alternative methods.
5. Very stimulating, challenged me to think about data, and programming data in a much different way than before. Tidy programming was very helpful to learn and made programming in this course and R way more intuitive.
6. This class was very interesting learning how to use the computer to manipulate our data, and do plenty of things with graphics and all that other cool stuff we learned with R. The professor was also great with helping us learn in class though. Hands down favorite stats professor at Grand valley.
8. The assigned text book was really useful and I learnt an enormous amount.
9. This class was very engaging. Since class time was so hands on it was definitely very stimulating.
10. Not really, the class was more to make us comfortable with R
11. As an R user, it is always good to go over the basics to pick up on topics you missed the first time. The new context of ideas after a little while can really be eye opening.
12. Yes, I started from scratch using RStudio and Github at the beginning of the class and it felt like sink or swim. I felt that learning R was both very challenging and rewarding.
13. Yeah, it introduced a variety of skills that I'll likely use in the future. There was a good selection of topics, from the Tidyverse stuff to web scraping to Shiny apps.

What aspects of this class contributed most to your learning?

1. The first midterm, and the homework assignments.
3. What contributed most to my learning was the dedication of class time to group work. The hands-on and collaborative nature of the tasks made the class very engaging, and it encouraged me to come prepared. I also liked the approach to grading. Even though it was kind of hard to understand, I think the mastery-based system was implemented very effectively. The feedback was very valuable, especially since we were able to use it to improve our submission. The feedback was also a big motivating factor for me because it demonstrated how much the professor cared about our learning.
4. I think the application tasks were helpful and most of the in class activities. I also liked that we were able to resubmit assignments.
5. The in class sessions were useful and engaging, finding the applicabilities of this course to other aspects was useful too. Really enjoyed that we got the ability to take this into the outside world too like I feel like I could start a blog and a solid professional base with the knowledge I have learned in this class.
6. The best part for me was the primers I would say. I liked to be able to go through and look at examples to prepare for class.
7. My group, I don't think I would have learned much of anything in this course if it weren't for my group mates explaining terms and code. I had no experience of R coming into this class. I think this class is tailored to people who have experience with this language. Google also contributed to my learning some during the midterms and assignments.
8. I loved the flipped classroom approach.
9. Class activities!
10. The assignments
11. The take home applications. These really were thought provoking and allowed me time to walk away from the problem and revisit.
12. The individual assignments. This is where I had to spend the most time researching and learning new techniques of getting the code to work as I wanted. I also liked the group aspect of the class and the grading style.
13. Working through the activities in class.

What aspects of this class detracted from your learning?

1. Preview activities, 2nd midterm.

3. What detracted from my learning was when we had too much to do for the activities in class. This pushed my team to divide up the work and rush through instead of taking our time to learn the content. I suppose this holds true for the individual assignments too - sometimes I simply didn't have the time in the day to get the full value this course had to offer. On one hand, you get out what you put in and this class can have a very high value; but on the other, it is frustrating that a three-credit class takes six credits of effort. If I were an undergrad, especially learning R for the first time, I don't think I'd be able to keep up.
4. I think the group activities were difficult when others in the group knew what was going on and how to do it but not everyone did because those that knew how to do it just kept going and those that did not were left behind. I also thought the work load was a lot. As a graduate level class I expected all of the work but it was still overwhelming at times. I think only having 2 weeks for the final project since we had the midterm to do too was difficult to put in the effort and quality that you were looking for in the final. I think better meeting preps would be more helpful as well. I also liked some aspects of the team based learning but I think some lecture and you talking about what it was that we were doing rather than just having us figure it out for ourselves would be beneficial.
5. Sometimes felt a bit rushed trying to get everything done in class. The first midterm I felt like too much time was forced on cleaning data and that wasn't really useful to me learning and felt more like busy work. I get why it is there though because data IRL will absolutely not be clean.
6. I didn't love the reverse classroom thing we did. I felt like I never had a good grasp on the content coming into class, even with pre-class assignments we had to prepare us. I'm not sure how else it could be taught though, but this felt like a hard way to learn it. I also felt that the graduate students made me feel stupid when they were blowing through assignments, or talking about how easy it was for them to do things. if possible maybe keep the undergrad and graduate students separate later in the future if they have enough students.
7. Class time usage, professor and assignments. This was a very frustrating class. I had no prior experience with R coming into the class. I didn't feel like anything was ever really taught to us. We sat in class and worked through activities, but there was no teaching/learning prior to doing the activities, so I had no knowledge base to work through the activities. I think the class was tailored to those who had experience with R prior to the class. I only learned based on my group teaching me things, which, as you can imagine, was quite frustrating (or googling code). Of note, I was very excited for this class and really wanted to gain a lot from it because I know use of R is growing in the biostats/research community. I've also taken other coding classes (CIS162 and STA318) in my undergrad and I excelled in both classes. We walked through examples and notes in class, then did activities on our own. So this was a very frustrating class as a whole for me - in terms of the teaching style, grading style, in-class work time, and level of difficulty of the assignments. The number of assignments we had as well as the amount of time it took me (someone with no experience prior to the class) was a little excessive as well. The first midterm took me over 25 hours to do. I definitely think this is related to my inexperience, but its difficult to manage an assignment that large.
8. The group work for in class activities did not promote individual activity or learning. It frequently ended with the most experienced coder doing all the work while other group members messed around with their own code.
9. Sometimes there were so many projects going on it was hard to prioritize.
10. All the Github emails
11. Some of the double task days. It felt like we blew through some of the topics.
12. I did not feel the primers were super helpful. Sometimes the group activities were less effective than they could've been. I felt if I took longer to understand something than some of my other group members did, then I was holding them back and slowing them down. But more often than not, I wasn't understanding something and they were.
13. Nothing to speak of.

What suggestions do you have for improving the class?

1. Please lecture more, provide solutions, or show examples. Even paper handouts of solutions could work. It was very hard never seeing an example provided by the instructor. I had no idea if there was a better way to do things, or if what I was doing was correct. Also, the work load in this class was ridiculous. It was the hardest class I have ever taken in my college career. It basically ruined my life. I like the professor, and I enjoyed learning R. But having 4 or 5 things to turn in so weeks was too much. Don't give homework's during midterms. The preview activities are useless. This class would be excellent if the amount of work was cut down, consider less assignments and no preview activities, and if the professor lectured or provided more examples and structured learning. The group learning was fun, I liked it. But why not throw in lectures to help everyone learn in the way they are used to?
2. I spent too much time just to complete the homework and projects in-class or outside of the class, it was kind of stressful to get a good grade in this class.
3. (1) I think it would be beneficial to go over the midterms in class. From my other programming classes, I've learned that everybody codes differently and there is a lot of value in reading how others solved the same problem. Even though we code together for the activities, this would be different in that we are making direct comparisons between independently developed solutions. (2) We should have a central location/calendar for all the due dates instead of digging through Blackboard and GitHub. (3) We should maybe learn some base R before we jump into the tidyverse. Had I not known some R coming in, I think I would have needed that to get my footing. This foundation material could easily replace some of the later more special use case stuff like web scraping and resume building.
4. A little less group work time and a little more you talking. I feel like I learned mostly how to look things up online, which is helpful, but I feel like I should have learned a little more in class. I also do not think that we were well prepared for the difficulty that the midterms were. But it was a good experience.
5. Feels like the final project was kind of sprung on us last minute, would have been nice to have more time to plan or account for it, receiving the assignment towards the beginning of the semester etc. Maybe could build on the project as we go throughout the course, e.g. for a shiny app, here is how you can start your analysis and some summary data, okay now here are some graphs, okay now try and put it in a shiny app and work up to it. Otherwise great class and loved learning in this class.
6. More primers!!!! I felt the primers were the best for me to try and understand the content, I also liked the fact that we can just google things for help on assignments and stuff like that. The only thing I would have liked to be improved was maybe throw in some vocab quizzes somehow?? so we are forced to study the important functions and whatnot that we need for the rest of the class. I spent a lot of time looking at things that weren't really necessary or that I didn't use again after one activity.
7. Teach during class time, walk through small activities and provide notes, then once students have a starting place, let them do activities and assignments on their own.

8. The organization of the course is problematic. Assignment deadlines are stored in different location to meeting prep requirements and neither of these are clearly listed on blackboard. If students are unfamiliar with github and do not know how to sign up to mailing lists they will miss out entirely on receiving notifications and meeting tasks. In addition, the deadlines to revise and resubmit work are only communicated in class on a whiteboard. This means students have to monitor at least 4 locations to find out requirements and deadlines. It makes it incredibly difficult to stay on top of what is due when. Most students are familiar with using blackboard as the central hub for assignment submission. While I appreciate the emphasis on learning github, it would be far more effective to issue class communications via blackboard, assign all tasks, meeting prep and assignments on blackboard and list all due dates on blackboard as well. This will vastly simplify the requirements for students to keep track of what's going on.
9. Applications every other week really would help - sometimes the workload was just intense. Also the rubric is a bit stressful in that getting an A hinges on the team project which is the only assignment that does not allow a resubmit and is not entirely my own. So it feels a bit like it doesn't matter how the rest of the class goes if I get a bad group or struggle in the last two weeks. I would recommend a caveat like received 95% Es on all assignments would still get an A even with an S on the team project.
10. Utilize blackboard more. Put all student responsibilities on a single page instead of spread between a few Github repos and blackboard.
11. I think this format is good, but it lends itself to some days from home. We were typically left to our own devices barring any questions, so maybe a hybrid style could be leveraged?
12. More examples of the types of things we did in R and in- class instruction. Also, only ONE midterm. I felt completely overloaded having both of those midterms, along with worrying about turning in other assignments for the course in the same weeks we were working on the midterms. It felt impossible at times and made me not even want to attempt it. Less structured assignments also would have been fun. The final project was great because we got to be creative in what we did. I would have liked more of that throughout the class.
13. Maybe could've eased us into the GitHub stuff more gradually in the beginning, offered more explanation of the what and why of it all.

IASystem Course Summary Reports summarize student ratings of a particular course or combination of courses. They provide a rich perspective on student views by reporting responses in three ways: as frequency distributions, average ratings, and either comparative or adjusted ratings. Remember in interpreting results that it is important to keep in mind the number of students who evaluated the course relative to the total course enrollment as shown on the upper right-hand corner of the report.

Frequency distributions. The percentage of students who selected each response choice is displayed for each item. Percentages are based on the number of students who answered the respective item rather than the number of students who evaluated the course because individual item response is optional.

Median ratings. IASystem reports average ratings in the form of item medians. Although means are a more familiar type of average than medians, they are less accurate in summarizing student ratings. This is because ratings distributions tend to be strongly skewed. That is, most of the ratings are at the high end of the scale and trail off to the low end.

The median indicates the point on the rating scale at which half of the students selected higher ratings, and half selected lower. Medians are computed to one decimal place by interpolation.¹ In general, higher medians reflect more favorable ratings. To interpret median ratings, compare the value of each median to the respective response scale: *Very Poor, Poor, Fair, Good, Very Good, Excellent (0-5); Never/None/Much Lower, About Half/Average, Always/Great/Much Higher (1-7); Slight, Moderate, Considerable, Extensive (1-4)*.

Comparative ratings. IASystem provides a normative comparison for each item by reporting the decile rank of the item median. Decile ranks compare the median rating of a particular item to ratings of the same item over the previous two academic years in all classes at the institution and within the college, school, or division. Decile ranks are shown only for items with sufficient normative data.

Decile ranks range from 0 (lowest) to 9 (highest). For all items, higher medians yield higher decile ranks. The 0 decile rank indicates an item median in the lowest 10% of all scores. A decile rank of 1 indicates a median above the bottom 10% and below the top 80%. A decile rank of 9 indicates a median in the top 10% of all scores. Because average ratings tend to be high, a rating of "good" or "average" may have a low decile rank.

Adjusted ratings. Research has shown that student ratings may be somewhat influenced by factors such as class size, expected grade, and reason for enrollment. To correct for this, IASystem reports **adjusted medians** for summative items (items #1-4 and their combined global rating) based on regression analyses of ratings over the previous two academic years in all classes at the respective institution. If large classes at the institution tend to be rated lower than small classes, for example, the adjusted medians for large classes will be slightly higher than their unadjusted medians.

When adjusted ratings are displayed for summative items, **relative rank** is displayed for the more specific (formative) items. Rankings serve as a guide in directing instructional improvement efforts. The top ranked items (1, 2, 3, etc.) represent areas that are going well from a student perspective; whereas the bottom ranked items (18, 17, 16, etc.) represent areas in which the instructor may want to make changes. Relative ranks are computed by first standardizing each item (subtracting the overall institutional average from the item rating for the particular course, then dividing by the standard deviation of the ratings across all courses) and then ranking those standardized scores.

Challenge and Engagement Index (CEI). Several IASystem items ask students how academically challenging they found the course to be. IASystem calculates the average of these items and reports them as a single index. *The Challenge and Engagement Index (CEI)* correlates only modestly with the global rating (median of items 1-4).

Optional Items. Student responses to instructor-supplied items are summarized at the end of the evaluation report. Median responses should be interpreted in light of the specific item text and response scale used (response values 1-6 on paper evaluation forms).

¹ For the specific method, see, for example, Guilford, J.P. (1965). *Fundamental statistics in psychology and education*. New York: McGraw-Hill Book Company, pp. 49-53.