*Do you have any additional comments about the computer versus the chalkboard as a presentation method?*

**Answers**

- No (x20)
  - Although I prefer hand written notes, the slides are useful for when I need to double check on the notes and various examples used in class.
  - When a computer is used, one cannot always write all of the notes down, because when the lecturer switches slides you can no longer see the previous slide’s notes.
  - With the technology, it will be much easier to access the lecture notes.
  - Computer is easier to read, and has more writable space.
  - I prefer a computer versus a chalkboard because I can access the computer slides later on after lecture if I need to see the slides again.
  - It doesn’t make a difference to me.
  - N/A
  - I think the computer tends to be more effective since the problem and other formulas are clearly stated and easily read.
  - I like chalkboard better than the presentation method.
  - I'm not sure that it's better. Sometimes it takes the lecturer 10 minutes of class time just to set everything up and they end up rushing through the material as a result.
  - The notes published online are extremely helpful. This way I can absorb the material and review it in the library afterwards without having to multitask in class: write everything down and comprehend it at the same time. Don't stop publishing them online!
  - The computer method works for me only if I have the lecture slides in front of me. Otherwise I waste time writing down slide information and cannot get the valuable info written by the professor.
  - I think that the computer works better and i really like that i can look it up online after class.
  - I like computers better cus we can see every slides clearly and they are accessible after class.
  - I definatly prefer computer over chalk board
  - The teachers should learn how to use it before starting classes so they don’t waste time figuring things out during lecture time.
  - When you are working on a chalkboard, you can’t move as quickly which allows for more time to actually see and understand the problem.
  - STRONGLY STRONGLY agree
• The computer screen makes it easier to read from a distance.
• Some classes work with the computer method because they put slides online and allow you to fill in the blanks, but in math it takes longer to copy down problems and teachers go ahead so you are left with a half done problem.
• don't go so fast and actually teach all the slides in the class time. The daily question is not important
• agree
• They both have their advantages in their own way
• Using a computer to teach math is hard to follow.
• knowledge of the computer is key if the instructor is to teach this course
Do you have any additional comments about the pre-class notes?

Answers

• No (x23)
• It can let us have a better understanding of the lecture. But I think there are not much people who will actually read the pre-class notes
• I learn better by writing my notes.
• They are very helpful.
• N/A (x3)
• I have no comments about the pre-class notes.
• The notes are mostly from the book anyway, so if you read your book you do not need the notes.
• I liked these because I could see exactly what we were going to be learning that day.
• save the trees!!
• Its helps a lot to see them ahead of time since we have to go so fast through the lecture and its hard to get everything copied down at once
• I don't think the notes very easily accessible... too confusing to find on moodle. I wouldn't use the outline notes in math because I cannot write formulas on my computer.
• don't really use them but they seem helpful
• I never looked at the outline before lecture
• help the students who do not have books in important
• I don't know of any pre-class notes for the class?
• it was helpful to have an outline
Do you have any additional comments about the post-class notes?

Answers

- No (x16)
- I can pay more attention to what the lecturer is saying and writing without having to worry that I am writing down all of the definitions and graphs and details of the problems.
- The button for Dr. Leary’s notes sometimes brings up Elizabeth Miller’s notes.
- Post-class notes can let us review the lecture afterwards if we have some questions during the lecture. I think it is a good one.
- There needs to be an extra, wide range mic in the seating, so student’s questions can be heard in context.
- It’d be easier to understand them if the writing was a little more legible.
- I really appreciate online lecture notes - that way, if I missed something, or if I want to review it, it’s available to me outside class.
- They help greatly in understanding the subject matter, studying for quizzes, etc.
- N/A (x3)
- I have no comments about the post-class notes.
- They are very helpful.
- Many of the lecture notes are directly from the book which is easier to read than something online and does not waste more paper.
- These are very helpful, especially if I miss a lecture.
- These were incredibly helpful.
- I think the notes on the textbook are already crystal clear, we need some exercise and sample questions in post-class notes.
- It’s great if you miss anything in class to be able to go back and look through it all.
- The extra slides the teachers write on have a smaller print and harder to read.
- Very helpful.
- Things in class are not covered in much depth. I can study the lecture notes but they aren’t very helpful when you can’t see the underlying principles behind the problems.
- It’s nice knowing I can go back online to see if I missed anything.
- Very helpful when I study.
- I overslept a class and being able to look at the notes from that lecture is very nice.
- They are very helpful.
• I’d be able to pay better attention if the teacher would say where he is getting numbers from rather than skipping steps
• Post class notes are nice because if you miss a lecture you know you can still get the notes online and watch the lecture video
Do you have any additional comments about the interactive figures (applets)?

Answers

- No (x19)
- sometimes these would not work on my computer
- We waste a lot of time setting things up and have to rush through the lesson
- I think it can help students have a better understanding during the lecture.
- They were useful... when they worked. They need to work more.
- More explanation of the figures would be helpful because sometimes I don’t understand them.
- No, I don't think they’re really useful, although they’re not really useless, either.
- I don’t think they help a great deal.
- N/A (x3)
- I think the interactive figures are interesting but sometimes aren’t as useful. They give a good depiction of what is being explained however at times.
- I am not very fond of them
- The interactive figures waste time on simple concepts that most people understand. I think the lecturer enjoys them more than we do. Sometimes they will try to open them and it won’t work, which takes time out of the lecture.
- These seemed unnecessary to me. They didn’t really add much to the lesson.
- not very impressive but acceptable.
- I can never seem to get the interative figures to work
- not very useful
- They dont help me, but they seem to help others.
- I think they can be a little distracting and takes away from the lecturer really explaining the topic clearly.
- I haven’t really used them on my own but them seem helpful
- they do enhance some understanding but only when the instructor explains them fully.
Do you have any additional comments about the online lecture videos?

Answers

• No (x18)
• Dr. Leary’s videos are frequently lost, and are not available.
• I think it is very useful because students can watch the video over and over again if they miss something during the lecture.
• Same microphone comment- hearing other people in addition to the professor would be very helpful.
• Fix them so they work more often.
• I love them! They’re so helpful, and it’s nice having the material available to me just like a lecture.
• I think they can be helpful if done consistently.
• N/A
• I have no comments about the online lecture videos. They are helpful and come in handy when something was missed in class.
• they are not helpful
• I have never used a lecture video, they just take up class time to set up.
• These are very helpful, especially if I miss a lecture
• I haven’t had a chance to look at any of them so I don’t know
• I don’t need it.
• I never use those videos, I only watch the lecture slides after class or refer to textbook.
• It’s awesome to see the notes and be able to rewind if you need to understand concept better.
• helped with studying
• I have viewed them a few times and they weren’t great but they served their purpose.
• Once again…. EXTREME strength in my agreement
• I don’t look at them
• The lecture videos are extremely helpful when I study for an exam. Lectures are usually fast paced and it can be hard to write everything down and still try to understand at the same time. Especially when the Lecturer is rushing through the slides.
• Very nice to have.
• they were very helpful
Do you have any additional comments about the clicker warm-up questions?

Answers

• No (x17)
  the clicker warm up questions are not a good idea, nobody responds because it isn't required and he doesn't even discuss why they are the answers he gives.
  I have never submitted an answer because I am usually too busy or in class so I can't access my computer.
  I don't think that is really useful. Because not many students is doing it.
  The internet inside the building needs to be fixed, most times people can't even get on it to do the clicker.
  I think more of an explanation of the answer would be helpful.
  So far, clicker has not really been that helpful. Webwork and lectures seem to be enough.

• N/A
  I think the clicker warmup is helpful and gets you thinking about the material before class starts, but since it is not mandatory I feel that no one ever chooses to do it and they prove ineffective. Also we lose class time going over it when no one cared to take notice to it to begin with.
  they are not helpful
  Waste of time, my phone does not get service in the lecture room thus i cannot use my phone via twitter and I am not lugging my computer around all day to answer a question that does not count towards my grade.
  Responding via text message would be the easiest way to answer the clicker questions.
  i think that it's a really good idea, but not executed very well.

• there are fine

• No motivation to do it.

• not useful at all
  I woud answer the clicker question if I thought that it would help with my understanding of the problem. But to understand the Clicker question, I would need in-depth notes which I previously stated, are not given.

• I didn't participate. But I the explanations were helpful

• I generally do math problems by myself and ask the teacher if I have problems. I don't find it useful to know what everyone else in the class thinks. It doesn't help me understand the problem.
• It would be nice for easier access. Often has no access to computers before class to answer it.
• I think it's a waste of time.
• I don't like the idea of texting answers, setting up a twitter for a math class, or paying for a clicker on my own. If bonus points were given I would log on to maybe Carmen and answer the question.
• I don't know how to use twitter.
• they would be more helpful if it was easier to answer them and if there was an incentive to do so.
If you were in charge of the technology pilot for next quarter, is there anything you would change from this quarter? If so, what?

Answers

• No (x16)
• Make sure the teachers know how to use the programs.
• homework on webwork
• I think all the technologies we are using right now is really useful and good.
• Get a better computer. If a computer is going to be running the whole show, it needs to be slightly more powerful- recording the screen is extremely intensive, plus all the programs running, and then the applets... Well, it’s no surprise they didn’t work all the time.
• The video and audio seems to mess up quite a bit, maybe fix that.
• Nope - I really liked the format of the technology pilot.
• Not so much technology; it hinders the actual class.
• I wouldn’t change anything because it all seems to be helpful. However, it is a hassle when the computer tends to be uncooperative.
• I would not have a clicker question
• Make sure that the lecturers knew how to use the technology.
• No interactive figures, no clicker
• Just get rid of the more unnecessary aspects
• i think this lecture is great and good enough
• Make all classes technology-enhanced.
• Yes, I would have an additional video of what was covered in lecture that went more in depth to what was being taught.
• More accessibility with the clicker. I would rather text
• Nothing really.
• Be more organized.
• the clicker question. it is something for the lecturer to talk about at the beginning of class but there is no participation and no incentive to participate so it ends up wasting time
• set up a camera to record the entire lecture hall, not just the screen.
• Would increase the speed of set up because a lot of time gets wasted at the beginning of the lecture resulting in a situation of not finishing the topics required to finish in that lecture.
• The only thing that I would change is that the teacher is comfortable using it before he starts teaching.

• The lecturer is almost always short on time and doesn't cover everything. I think the lectures should be longer so he can spend more time on the problems. Also more needs to be done to avoid technical problems, so we aren't missing any lecture videos, and so too much time isn't wasted getting the computer ready.

• No, it's running smoothly the way it is

• Have a computer tutoring class with each instructor for a week before hand so that they could learn how to use the program to their students best advantage.
Do you have any other comments? (optional)

Answers

• No (x23)
• We wasted time every day on the technology, trying to get it to work or trying to get it to cooperate. Of the 48 minute lecture we spent at least 10 minutes each class just sitting there watching him fiddle with it. The technology enhanced lectures are nice, and a great idea, but it seemed like not everyone was prepared.
• I would like to be able to see the lecturer, often they do things that aren't done on the computer screen and one cannot see that with the present set-up.
• I accidentally submitted two surveys, as you can tell. I meant to save the first one as I realised I was late for class. I hit submit instead. Whoops. This is the right one, disregard the other?
• It would be more helpful if answers and notes written on the computer were explained alittle more in depth.
• No other comments.
• N/A
• I have no other comments.
• I like when the info is given on the chalk board better.
• I think that the technology is really nice and a great idea, however, i don't think my professor knew exactly how to work it. I think I would of liked it even more if he didn't have to take five minutes to figure out what he was doing.
• I’m going to be trying to find a class that uses the technology. I just hope one exists for MATH 152
• need to be able to get through all of the slides during one lecture
• I need a teacher, not a researcher.
• Unfortunately, I did not do well in math 151.01 in Winter 2010... so I retook the class. I am soo thanful for the interactive lectures-- they made things a LOT easier. Many of these concepts are very hard to grasp... so being able to listen to the lecture on my iPod or computer in my free time is a big help. I am very appreciative!
• I don't think technology is any replacement for smaller class size and a good teacher.
• Make sure the professor knows how to work the computer before classes. It delays class a lot if they do not know how to work the system.
• The online videos are the best thing about the technology enhanced lectures. If the student doesn’t like the way their lecturer explains something the student can look at another lecturer’s way of explaining something. also it helps a lot when studying because written notes are not the same as hearing someone explain it to you.
• More practice problems should be given. The questions in the book aren’t good enough to repetitively practice with, and the webwork alone isn’t enough practice.
• Do each step stop skipping steps. Explain everything rather than rushing through the problems. Also the math book is terrible, hard to follow and understand.