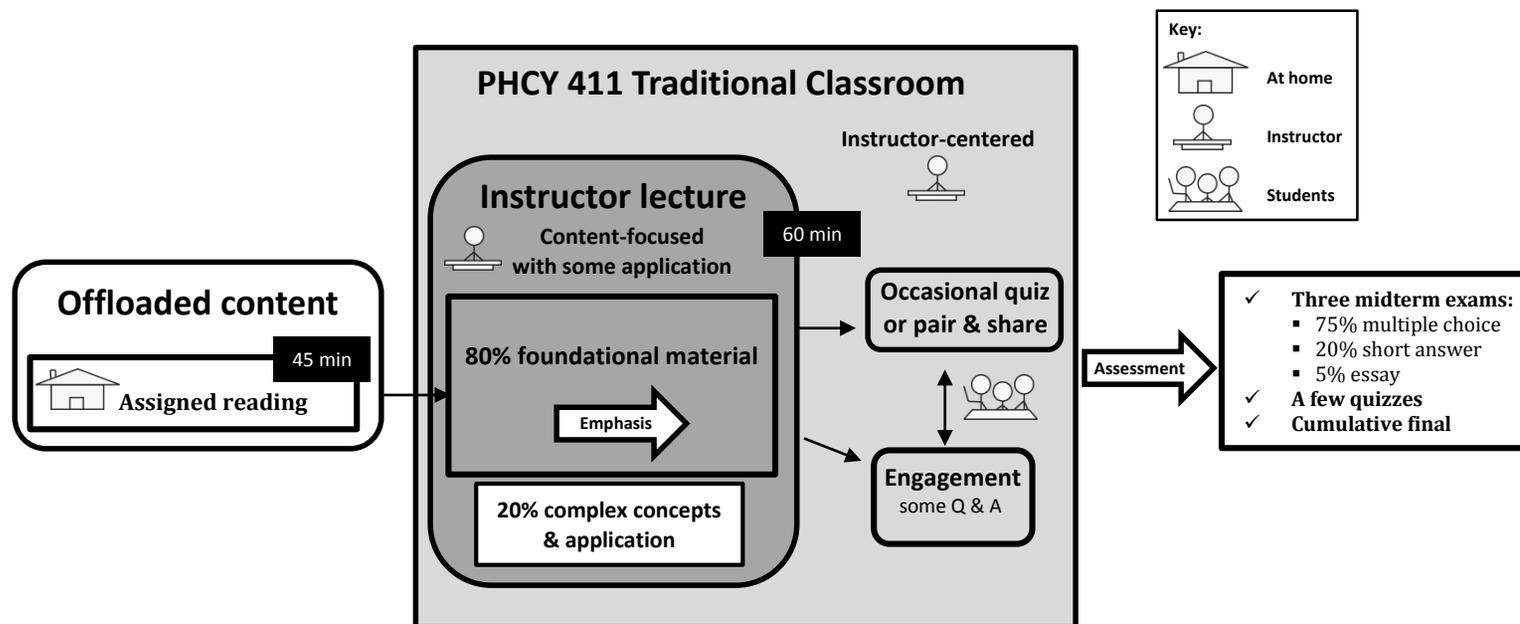


Supplemental Digital Figure 1 Traditional format of the Basic Pharmaceutics II (PHCY 411) course offered until 2011 at the University of North Carolina Eshleman School of Pharmacy



Supplemental Digital Table 1

Comparison of the Hourly Time Commitment for the Instructors and Teaching Assistants (TAs) of the Basic Pharmaceutics II (PHCY 411) Course in 2011 (Traditional Format), 2012 (Flipped Classroom Format), and 2013 (Flipped Classroom Format with Proposed Changes) at the University of North Carolina Eshleman School of Pharmacy

No.	Key components of course redesign	2011	2012	2013	Comments
1	Converting 25 established lectures (75 min each) to integrated learning accelerator modules (iLAMs) (~35 min each)	0	60	4	In 2013, just a few iLAMs need to be updated.
2	Updating syllabus	1	4	2	
3	Preparing ~250 clicker questions	0	20	2	In 2013, just a few clicker questions will be updated.
4	Preparing/grading six reflective pair & shares	0	18	26	In 2013, all students will be required to submit at least two responses.
5	Grading student presentations	0	30	0	In 2013, student presentations will be eliminated.
6	Preparing rapid pair & share	0	8	12	In 2013, questions will be updated.
7	Attending class (including exams)*	38	38	38	
8	Preparing & grading quizzes*	24	55	10	In 2013, quizzes will be offloaded and graded electronically.
9	Preparing & grading midterm exams*	45	102	102	Significant increases in free response questions require more grading.
10	Preparing & grading final exam*	3	3	3	Final exam is electronically graded.
11	Holding office hours (instructors/TA)*	34	34	34	
12	Communicating with students*	60	50	25	

13	Grading the package insert analysis project*	0	50	18	In 2013, project will be graded in class by students with instructor input.
14	Grading the clinical pharmaceuticals proposal outline project*	0	40	0	In 2013, project will be eliminated.
15	Maintaining the online course site	5	15	12	
16	Maintaining the general course (grade book, returning of graded material)*	40	40	20	In 2013, more efficient elements will reduce or eliminate several time commitments.
17	Developing and maintaining <i>411 Pharmacopedia</i>	0	0	25	In 2013, tool will be added as extra credit to promote engagement.
18	Reading and evaluating contemporary reading	0	0	60	In 2013, this will be a new active learning exercise.
Total time commitment		250	567 (+127%)	393 (+57%)	In 2012, total time increased by 127% over 2011; however, in 2013, total time will increase by 57% over 2011.
Time distribution					Flipping a course takes significant upfront faculty time, but only 30% more time to sustain with a good design and a highly trained TA
	TA	140	270	250	
	Faculty	110	297	143 (+30%)	

* Components that the TA contributed to in 2011 and 2012.

Supplemental Digital List 1

All-Inclusive Student Feedback to Six Questions (#1-6) about the Basic Pharmaceutics II (PHCY 411) Course at the University of North Carolina Eshleman School of Pharmacy in Spring 2012

Teaching and learning methods in this course (e.g. lectures, pre-lab sessions, classroom discussion or learning activities) promoted understanding and application of key concepts.

Absolutely retained more from watching iLAMs and having discussion in class rather than a lecture format.

All of the teaching methods were very effective. I believe student presentations would be more effective if the material needing to be covered in ten minutes was a little less than what was required for us. There was just too much information with too little time to effectively present.

At first, I did not think that I was going to like this method of learning, but as the semester went on, I liked it more. I feel like I understand the material better than I do in any of my other courses. My only change to the format would be to eliminate the student presentations. I felt like this was the weakest portion to the format.

The clicker questions and Pair/Shares were good for teaching back and learning the material again.

The clicker questions were great for reinforcing key concepts from the iLAMs.

Definitely.

I agree that all the methods helped to reinforce understanding of the key concepts. However, I felt that the reading was too much to go along with the iLAM, and we were frequently given frivolous material that was unnecessary.

I agree with this statement for the majority of the methods, except the student presentations. Most of the class did not listen to the presentations at all, and I never got much from them.

I believe it hindered my understanding and application of key concepts. The lectures were so brief and really did not have the amount of content needed to accurately apply and understand key concepts.

I came into this course fully expecting to hate it. I was not excited about having to watch lectures on my own time and then still go to class and talk about the same stuff. But with the instructor's promise that if we put in the work and did what was outlined in the syllabus that we would succeed in the course, I gave it my best. I can honestly say I left every class session feeling like I knew more than when I walked in and I was thinking about the concepts presented in new and unique ways that I would not have been in a traditional lecture style course.

I do not benefit from watching the iLAMs because I do not retain the information. I also do not think this kind of class structure would be good for all classes.

I do not think people, in general and on average, paid much attention to class presentations. I am not sure whether the presentations on the readings were a productive use of time. The textbook readings were applicable but not necessarily tested on. It becomes a game of economics whether to decide to focus on these readings that are time consuming and difficult to retain (I would only retain 15-30% of material after a focused reading) when they are unlikely to factor in heavily on tests. I think it inevitably gets to this point although ideally everyone would read them.

I enjoyed the pair and shares, which were extremely helpful in having a broader depth of knowledge on the topics covered.

I enjoyed watching the lecture before coming to class. Seeing things before class time made the information sink in more instead of bouncing right off.

I felt that the outside reading and student presentations were not as useful as other tools such as watching iLAMs or clicker questions.

I felt that the student presentations were not as effective as they could have been. The clicker questions and time dedicated for the professor to answer any questions we had were very helpful.

I felt the student presentations were a little superfluous. I would have preferred having a guaranteed presentation once in the semester that I could have really delved into rather than two hoping that my name would not be chosen that day.

I know how I learn best and it is not the way the instructor made us learn in this class. I learn best by sitting down alone with a book or sitting and staring at a list of material and organizing it in some way to fit together. I DO NOT learn well by listening to lectures, active learning, or talking to other people, which were the very things my time was wasted with. I appreciated the instructor trying something new and experimenting, and I admire that the instructor wanted to find a way for us to learn better. And it did work better for most of the students. I think the thing that the instructor needs to understand, however, is that not all students learn the same way; for those of us that do not learn the way the instructor wanted us to, this class was very good at consuming the little time I had to actually study. Therefore, I never had the time I needed to learn the concepts well. I know the instructor would argue that it means I just needed to spend more time with the material, but is that not the entire point in the new format is to save time? I know myself and I know I could have been successful in this course had it been a different format.

Another related problem was that the instructor said that class time was for "active learning" where we would not introduce new material. However, the exams contained mostly material from these times. As I said before, this is not how I learn, which was a huge problem for me. When it was just a big review session (rather than presenting new material) this was still not helpful for me, as I do not learn this way. Even with this, I can see the merit of asking questions to get us to think. However, the value of this was completely destroyed by giving us the answers almost immediately. Most of the time, I did not really have enough time to explore and think about the questions before they were answered. Had they been shorter questions or if we had turned in

answers or something it may have been more helpful.

Finally, the group presentations were awful. I do not think the groups or the rest of the class benefited from these at all. Maybe if we were split into groups and one person for each class in the group was told to explain the reading to the group it would be a little better, but I still question the usefulness of making us study a certain way.

If we are adults we should be treated as such and should take charge of our own learning. At this point in our lives we should know the best way that we learn. This comment will probably be quickly discarded when you look at the statistics, but statistics only tell you so much. Statistics cannot tell you about the people whose grades went from an A to a C. These statistics cannot tell you about how many more hours students had to spend learning material. Statistics cannot tell you whether students are LEARNING the material or if they just memorize the list that happened to be on the test. I see what the instructor is trying to do here, but I really do not think the whole of teaching needs to be changed to fit new trends in the education world. I do not think lectures would have existed in the college environment for centuries if it did not work. The most I have ever learned is from lecturers who incorporate questions and some of the other things that the instructor is trying to do in their lectures. The most successful instructors pull students into their lectures by talking about their own research or interesting stories, or just talking like they are having a conversation (not like they are trying to rush through as much material as possible). They have us learn outside of class, usually by reading, and have us do assignments as we see fit for what we need to review. That is a pretty traditional format, but the key is the teacher, not the format. The instructor seemed very comfortable lecturing. I learned the most when he was just talking.

I learned a lot from this class but I wonder what the workload would be like if all classes were in this format - how much time would it take up outside of class? Would it leave adequate time for extracurricular activities?

I liked the format in which this course was taught. It did require more work in pre-class preparation, but that made the class much more productive.

I liked the iLAMs and learned more because they introduced the key concepts, which we built upon and tested in class. The readings were sometimes hard to decide what was important; it was easy for me to overlook something from the readings as not important if it was not talked about in class or on the iLAM.

I liked the in class discussions and the pair and share questions online. Both of these activities gave me the opportunity to use what I had learned in the iLAM videos to answer a question or solve a problem. This either reinforced the concepts I knew or made me realize what I did not understand.

I liked the lectures but some were a little long. The in class pair and shares I thought were helpful and a great way to apply the knowledge, but the student presentations were almost just like busy work and everyone tuned out during them, unfortunately.

I liked the pre-lecture videos and the clicker questions.

I liked the structure of the course watching lectures beforehand.

I much prefer watching iLAMs before coming to class. I would prefer if the videos were about 30 minutes long. I am okay with doing group presentations, however I think there should be a better system in selecting groups to go so that groups do not go twice, or never go.

I really appreciated the instructor trying out a new learning technique. It was different, but I enjoyed coming to class more and I also feel that I will retain the information for longer. It helped make learning "fun" again and not just endless hours of lectures and PowerPoint's.

I really liked the clicker questions and iLAMs.

I really liked the learning method in this course. I prefer watching my lectures at home on my own time and taking notes. Being able to pause and rewind is very helpful.

I think that the student presentation aspect to this course should be removed, as many students do not pay much attention during this time, especially since that material was not a significant part of the exams.

I think the different teaching style was helpful.

I thought student presentations were not that helpful.

I understand and appreciate the material from this course more than any course I took this semester. And, not to put any one down, but dosage forms are not my favorite topic, so that is saying something.

It was nice to be able to discuss the material in class after watching the lectures. I also liked and especially benefited from the reflective pair and shares and the package insert analysis project. Those two particular assignments, more than anything else, helped me understand and remember the course information.

I absolutely enjoyed the structure of the course although I was not excited about it prior to the beginning of the semester. The extra time spent watching the iLAMs was actually much more beneficial than a conventional classroom structure. The discussions with the clicker questions and pair and share were much more rewarding and thought provoking than the typical class discussion.

I loved the clicker questions and other active learning materials.

I like all aspects of the course with the exception of the student presentations.

Some of the iLAMs were just reading from the slide. If that is the case, I would rather just have a reading assignment and not reading plus an iLAM. For instance, the ophthalmic handout was helpful. The presentations were only helpful when the students were preparing for them. They were difficult to pay attention to in class.

Some of the quizzes were way too hard. The clicker questions and quizzes should be a learning material instead of a grade.

Student presentations were not as helpful as I expected them to be. They were basically a regurgitation of chapter contents. Class time could have been utilized for something else more productive.

Teaching and learning methods in this course were phenomenally taught by the instructor. I learned and understand the key concepts from the iLAM through class discussions. When students at Chapel Hill campus ask a question similar to the questions that I have, the instructor was able to explain the concept in a realistic and easy way for us to understand. The instructor would ask "Why do you think that..." to help students to think critically with our own answer through what we learned rather than just state the facts that were already known. I truly appreciated the efforts. Not only the instructor, but also guest lecturers followed the same teaching method and still made me (and other students) engaged in active listening and participation. In addition, I got to know my professors even being on a satellite campus through their teaching, because I still able to remember their name and lectures that they have taught. Thank you instructors!

That is what the educational renaissance is all about.

The daily quizzes made me keep up to task and helped retain the material more, so studying for tests was easier

The design of this course helped greatly with understanding, but with 4-6 other course plus extracurricular activities, having the time to do all of the pre-class assignments was not always possible. You can tell as the semester progressed, I had less and less time to do the out of class work. If I had had the same amount of time throughout the semester as I had at the beginning I would probably have performed more consistently.

The iLAM lectures for the most part highlighted the key points in the lecture and exams.

The iLAM videos were extremely helpful and made the course material more understandable. I liked being able to access the iLAM whenever I had a question about a certain topic, or merely needed a refresher.

The iLAM videos were incredibly helpful, as was the format for how the class operated. I think this structure of learning maximized my time both inside and outside of the classroom

The only activity that I felt did not help with learning was the student presentations. I learned more when I prepared my own presentation (more thoroughly looked at the material), but I did not learn more when students presented the material to me.

The student presentations in this class were completely worthless. The majority of people do not even pay attention to them. When I did pay attention, they were awful. It just consisted of students reading off of the slide. I feel like I do not benefit at all from them. It would have been better to just have the instructor recapitulate what we needed to know rather than listening to these presentations.

The student presentations were kind of a waste in my opinion. There was no real incentive to put any effort into the presentation, and so everyone just made really dense slides that repeated the reading, and then often read directly off the slides while presenting. It was just nearly impossible to pay attention, for me at least. The questions, pair and share, and quiz were all good though.

The teaching methods used in this class greatly enhanced my understanding, and I think I will continue to benefit from a greater retention of the material as well.

There was a lot of work for this class, but it clearly paid off doing everything as stated in the syllabus.

There was simply not enough time to keep up in this course.

The teaching and learning methods helped me to understand concepts but only because this is the only way we got lectured to.

Watching lectures via iLAM is no different than watching live lectures.

Watching the lectures before class was helpful, but I did not find the pair and share or the student presentations very helpful.

Watching iLAMs did prepare me for the most part. The readings were very exhaustive and sometimes not as relevant, so the few bits of information that were actually beneficial began to become a burden.

Maybe less time spent on in-class student presentations and more on an active learning.

Learning materials and resources for this course were helpful.

A few of the chapters in the book were a bit too long, with too much extraneous information. Otherwise, the review articles and most of the chapter selections were well chosen.

The textbook is good, but goes into more detail than we really need for this course.

The book could be very detailed at times making it hard to decipher what material was most important.

The book was a decent resource but definitely had some tangents that were not as relevant to class. I wish there was a book that tied in more clearly and outlined the course more effectively.

The clicker questions were great for reviewing for tests.

I did not like the book. It was not helpful mostly because many of the required chapters were too focused on specific products rather than general applicable knowledge. The iLAM's were great though.

I did not think the student reading presentations were helpful. I never learned anything extra from them and spent time I could have used studying preparing my two slides.

I do not think the extra reading should have been required. It was a lot of outside class work, more than our other classes.

I generally did the readings but do not feel like I got much out of them at all.

I had to watch the lectures more than once. But even that was not enough.

I like that the lectures were short and easy to re-watch when I needed to refresh my knowledge for the final.

I like the iLAMs.

I liked the textbook.

I loved having access to the iLAM videos and being able to watch and understand the information at my own pace. It was also great to be able to replay certain parts that may have been more difficult to understand.

I think the readings could be more focused. Or it should be expressed exactly what we need to get from the readings, because it is a lot of material.

I think the learning materials and resources could have been helpful had I not gotten confused by us jumping around so much. If I had just started from the beginning of the book and read through and not gone to class or listened to lectures, I think I would have understood the material better in less time.

I thought that the iLAMs were helpful in demonstrating the material. The instructor's iLAMs were especially helpful and gave information at a good pace and in a straightforward manner. However, it seemed the other lecturers were not instructed on how the iLAMs should be done and frequently theirs were much longer, contained too many slides, and they proceeded at a pace that was much too quick to take any additional notes on what was said. These long lectures made completing the additional readings almost impossible.

I thought the clicker questions were especially helpful.

iLAM, notes, and quizzes (clicker and graded) were all very helpful in learning the material.

iLAMs were good. Presentations were not as helpful. Listening to them was not helpful at all.

iLAMs were very helpful. Also the PowerPoint slides were helpful.

iLAMs were very helpful. Reading was dense, but had important concepts.

Never used the book.

Some of the readings, such as the handout on the IND, I did not find interesting or helpful towards learning the material.

Some of the readings were unnecessary and only repeated the information in the iLAMs. Also, I did not like when the instructors suggested looking at other websites for more information. I was not sure if I was expected to study those websites or if it they were just optional material for further reading. If they were option, the instructor should say so, and if they were not, I think the instructor expected us to know too much information. We should be responsible for the material covered in the iLAM and what is discussed in class.

Some readings were too long.

The abbreviated recorded lectures were a great resource. Having all of the course materials organized and available to us was helpful as well.

The additional reading was average, it offered more information than needed or at times was too basic.

The book did not seem to cover much of the class material, but some of the other reading assignments were helpful.

The book for this course went too in depth in some topics and not enough in others. I rarely used it because it do not seem too helpful

The book is incredibly dry. The papers assigned for reading were much more helpful.

The book was completely pointless.

The book was really comprehensive and had a lot of excess material that I think should be optional from the iLAM.

The iLAM and the lectures from in class sessions were very helpful in aiding in my understanding of the test material

The iLAM videos were incredible. I wish all classes were designed like this. I was able to truly learn what being an independent student meant and I learned HOW to study, a skill that is actually pretty difficult to develop.

The iLAMs were helpful especially in going over complex/unclear concepts.

The in class quizzes.

The lectures were straightforward.

The materials that I have learned from the class were very helpful! I was able to utilize the contents in everyday living and working in the pharmacy as a technician filling and transcribing medication. In addition, the package insert assignment had helped me to understand the drug in more detail. Most people would not read a package inserts that comes from the bottle just as I would have, but now, I have become more interested in every perspective about the drug's ADME, clinical studies, and its development. I really liked the package insert assignment.

The only thing I would recommend to change is re-recording the vaccines lecture, which I did not find very helpful.

The textbook and additional readings were not useful. The iLAM lectures were incredibly useful.

The textbook is not useful and is not needed. Lectures and class time were sufficient.

There were a lot of good resources, but I do not have time to look at everything.

Very helpful, I think the only thing to add would possibly be practice exams, in order to be exposed to new questions as part of the review process.

Very organized!

Active student engagement (e.g. discussion, small group work, think-pair-share) in class (or pre-lab) was consistently encouraged by instructors in this course.

A lot of time the presentations at the end were kind of hard to pay attention to. It may be more helpful if they were at the beginning or the middle of class.

Active student engagement was always required!

CONSTANTLY! We were encouraged every day to collaborate in many ways whether it is in group presentations or "Pair and Share" discussions or online discussions, we were always engaging in discussion and collaboration.

The instructors consistently encouraged our thinking and communication skills. As a student, we were asked why and how, even in concepts that we did not learn in class. We were challenged and asked to come up with rational answers based upon what we had learned in class. This is very critical!

The instructor definitely had the strongest think-pair-shares, but every guest lecturer also clearly had the same goals regarding active learning. In my opinion, the think-pair-shares were the strongest element that enabled greater retention of the material, despite some initial reservations.

Everything was fine except for student presentations on the reading. It was a way for people to study for the upcoming quiz and was a waste of 20 minutes, especially because many people do not read and also do not need to study it for the exams. Also making your presentation was a lot of work for nothing because you knew no one was listening and also it was an unfair way of presenting, some groups went twice while some did not present at all.

I liked the clicker questions and the pair shares as they tested my knowledge and for the most part made me apply info we learned in class.

I loved it.

I prefer this style of course to straight lecture.

I think the pair and shares were helpful and it was good that we were only given a short amount of time because that kept us from just chitchatting about non-pharmaceutics subject matter. I did not think that the group presentations were very helpful, however.

Loved the interaction this course provided. So much better than listening to a bland lecture.

Plenty of discussion during class.

Sometimes we were not really given enough time to think.

Student interaction and communication was integral to the in class portion of this course.

The clicker questions and activities prepared for class such as quizzes and pair and shares were much more interesting and beneficial than a regular classroom structure.

The clicker questions, pair-share, quiz, and professor Q/A time were very helpful.

The group work and clicker questions were good.

The pair/share and student presentations did not aid in my learning material, just the clicker questions.

The pair-shares were stopped mid-semester without us being told that it would be the last one. Since we had pair and shares in almost every class prior, I assumed that these would continue for the remainder of the classes, and I feel like I missed some points because of that.

The student pair and shares and in-class pair and shares allowed us to really learn the material through direct application.

The student presentations should be reconfigured or discontinued.

The active student engagement methods really helped reinforce concepts learned in the iLAMs. My thoughts regarding the day's pair-share were not always right, but encouraged me to think about the problem/question.

Think pair-share was definitely a good way to consider all that we had learned from the previous lecture. My only suggestion would be to allow students to submit questions that would appear in clicker questions so that pertinent points can be addressed.

This class was designed to allow more active student engagement; all instructors encouraged such participation and I think overall it went very well.

This was great! I really appreciated the group work and student lead activities.

This was more helpful than simply listening to the lecture.

We had a think pair share every class period.

Overall, I prefer the active learning class format to the more traditional lecture-based format.

Absolutely not. It required double the work. I earned a B in another instructor's class with half the stress, much more enjoyment, and I actually read the textbook reading! And that is saying something. The book used in that course was a bit dry, but I read it nonetheless. BECAUSE IT WAS NOT REQUIRED! I could do the reading in a reasonable amount of time, study the slides, and take notes, because I did not have to watch a 45-minute lecture every day before class even started.

The active learning concept was hard for me to adjust to, mainly because the questions that would arise during the iLAM often went unanswered or forgotten during class. I feel it is important to be present as the professor is lecturing material. During this course, the class time used for a review session, quiz, and student presentation did not really benefit me that much.

Active learning is so much more effective than lecturing, which is not necessarily passive learning, but gears students to "tune out".

Active learning provided much elaboration that enhanced my learning.

Active learning was definitely better!! Again, I could pause and take notes in areas that I personally did not understand in the iLAMs before going to class. Then in class, I was ready to focus on what the teacher was saying and could think about the topic, instead of taking notes like a mad man.

Although, I truly believe that I learned a lot from being in this class, I do not believe that the additional time commitment was worth what I gained from the class. It may be more beneficial to the class if one day a week was lecture and one day was active learning.

I definitely learned a lot from this class, and I feel that I retained the information instead of memorizing it for an exam and then forgetting it. However, I am concerned about time constraints if most of our classes switched to this format.

I have a hard time focusing in lecture-based courses. The interaction in this course kept me engaged and let me apply my knowledge.

While I enjoyed the class, if all classes were conducted with this amount of outside work expected I would not have been able to do it.

At times I felt like I had to teach myself. I like the traditional method where a professor lectures and if I have questions I can ask them at that point in time.

Active learning definitely kept me involved during class. Compared with traditional lectures, I was able to maintain focus and stay on task much longer and with better intensity.

I did not have to re-watch lectures because I could pause lectures to write notes. The quizzes forced me to keep up to date.

I felt like class time was useful and not a waste of time to attend.

Going into this class, I thought I would HATE the course design. I dreaded the start of the semester after reading through the syllabus over Christmas break. As the instructor predicted, however, my mindset was completely transformed and this has been my favorite course in my entire academic career to date. I absolutely prefer this course design to any others I have had so far.

I do not think this application is feasible for every class. If it is employed in more classes, then class time needs to be decreased to account for lectures being watched outside of class.

It all boils down to the fact that I felt like I learned something each class period whereas in a previous class, I learned the most during studying a couple of days before the exam. That tends to lead to me forgetting everything right after the exam. A situation I call academic "binging and purging".

I do feel like we were able to learn 80% of the material easily but the other 20% should have had at least an additional 20 minute portion in class. This course seemed to go a lot more in depth and the teaching method allowed us the opportunity to learn it on our own time, but I still feel that an additional 20-minute lecture for more difficult material would be nice in class.

I do not think this style of learning is applicable for every class/subject, but it was helpful in this case.

I enjoy preparing for class and listening to the iLAMs and then applying the information in class. I do know this would not be feasible for all of my classes. However, this was a very helpful method for learning, and I can see myself learning more from my other classes if they employed this method because it requires a more interactive measure rather than sitting and listening the entire lecture.

I enjoyed this course much more than my course prior, but I think it is more due to the presentation style differences between instructors than the class format.

I enjoyed the setup of the class but I would not be able to handle the workload if all my classes were set up like this.

I feel I have retained MUCH more knowledge than in previous courses. I also am much more interested in the material.

I feel like I get more out of traditional lecture-based format.

I feel like this course gave me more of an opportunity to gauge my understanding of the material as it was presented instead of realizing what I do not really understand come test day like in my previous course.

I feel that the format fit very well with this course. I worry about the capacity to be able to do this format with multiple courses. It was difficult to prioritize time towards courses with exams. I understand the concept of challenging us to our greatest potential, I just worry about burning out. Towards the end of the course I admit I was not watching the iLAMs as regularly and relied on class time and student presentations to study for quizzes.

I felt as if I understood the material better. Talking concepts over made me understand the material better and reinforced what was discussed in the iLAM recordings.

I felt as though I really understood the class and what was going on this semester as opposed to last semester. Like my instructor said, if you kept up with all the lectures during the semester when it came time for exams there would not be any cramming, it was just a matter of reviewing the notes.

I felt I did not have a complete and thorough learning experience. I felt like a lot of needed information was glossed over.

I felt like I could be more engaged in deeper discussions because I came to class with a basis of knowledge about the topic. It made me more engaged and interested in the material, and it made me more prepared to think critically and apply the things that I had learned.

I felt like I did not have to prepare as much for exams in this class. I was never stressed out about an upcoming exam and performed decent on each one.

I felt like I grasped the material a lot faster with this method, and it helps students retain information more readily.

I felt like it helped lessen the load and material that I need to learn before tests.

I felt that I learned the material much better. As I was studying for the final exam, I could recall a lot of the information, it was just a matter of refreshing some points.

I found the prerequisite to this course to be a little confusing, and it was easy to drift off and lose focus during the PowerPoint lectures. This courses' format presented topics much clearer. The number of resources for learning in this class was helpful as well - iLAM, textbook, PDF notes - so that if one source was confusing, we could look at another to help clarify. I really enjoyed this aspect of the class.

I greatly enjoyed when the instructor was the coordinator of the lecture, but I felt when other professors lectured it did not run as smoothly.

I learned a lot from this "active learning" format; however, I do not think it would be feasible to make every class like this. Overall, I felt as if the class required a lot more extra work (which was not reflected in my grade). I am not an auditory learner, so the discussions never reinforced the material as much as I would have liked. As a visual learner, I still had to go over the slides on my own several times to remember the material.

I learned better having the lectures presented in the iLAM, instead of in person. I was able to customize the lectures to what I needed. For material I was already very familiar with, I could spend less time listening to the lectures. For material that was more difficult for me to understand I could pause, rewind, and spend as much time as I needed to be sure I understood the concepts being taught.

I like a mixture of active learning and traditional. Traditional is what I am used to. It is sometimes nice just to listen to a lecture and record notes based on the information, but "spicing" things up with active learning is nice to break up the monotony.

I like the idea of watching lectures outside of class, and it makes class time much more appealing when everyone is prepared and participates. I think however, that our increased prep time outside of class should be balanced by less time in class. If we are more productive, we should not need as much time to go over material in class.

I loved the style. I feel like it helped imprint the information for long-lasting recall. However, my concern is that if all classes were like this, there would be an overload of outside time dedication from week to week.

I performed considerably better in this course in comparison to the first semester course that used traditional lecture-based format.

I prefer to listen to a lecture, but I did like the iLAM and discussion more than a lecture where the professor reads the slides to us.

I really did appreciate the fact that this format allowed me to stay up to speed with the material. However, I feel that I would have learned the material well whether I had taken it in this format or in the traditional lecture-based format.

I really enjoyed the format of the class this semester.

I really felt like I retained more information with this model, classes were much more enjoyable and exams were less stressful.

I retained more knowledge throughout the semester. As a result, I did not have to cram for tests, but only had to review the finer points. On the other hand, this came at a price, which was a disproportionately large time investment compared to other classes on a weekly basis. This format required too much work. It is difficult for me to say whether I benefited from the format itself, or because I was investing much more time into the material than I would otherwise.

I strongly prefer the format in this course to other traditional lecture-based format. However, I still have to take into consideration the materials/concepts as one method might work in one course and not as well in another. However, the format in this course incorporated the traditional lecture-based format and put it into a more advanced level. Overall, I prefer the format in this course.

I really enjoyed being able to use time in class to clarify concepts and drill in major points, instead of just getting a chance to go over everything once in class like in traditional courses.

I think the approach in this course let me be a more active learner. I definitely took more away from this course than prerequisite.

I think the biggest benefit was being able to listen to lectures ahead of time. Then the questions and pair and share challenged us to think about what we learned.

I think we should slow down with this whole educational renaissance. It has a lot of flaws to work out. If every class takes this format then we will be DROWNED in lectures. I do not think it enhanced my learning THAT much for me to want this method in all of my classes. I still did badly on the tests, so I cannot vouch for the educational renaissance.

I thought it would be annoying, but since the iLAMs were not too long, I think it worked out and probably made class a lot more interesting.

I thought that by offloading the material, we could learn on our own made class time more effective.

I understood the material better than any other class. I learn better during discussions after watching the lectures. I felt prepared for classes. Studying for exams did not seem as daunting because I already felt knowledgeable of the material.

I was forced to stay on top of class material. I did not cram for exams and maintained a good understanding of class material.

I was more engaged and I actually learned the material rather than memorizing.

I was very pleased with this format. It required more pre-class preparation, but it made the lectures much more productive because everyone had already reviewed the material and during the lectures we were able to learn how we could apply this information to the practice of pharmacy.

I would have to only slightly agree. It really depends on the student's learning style. I like examples: here is a concept, run through it step by step, and I will take note and then some activity where I can apply.

I would like every class possible to be like this.

I would much rather a teacher lecture during assigned lecture time.

I would rather get some things out of a lecture and learn them on my own later.

If this is how more classes will be taught I think in class time will have to be decreased in order for us to have enough time to do this prep work for multiple courses.

iLAM and interactive course design provided useful repetition of information and allowed for knowledge application.

I am actually torn between the two types of class formats. I think either can be great learning vehicles - it typically depends on the professor in charge and how well they lecture &/or facilitate class discussion. I think any motivated student can learn in either type of course structure.

Interactive discussion during class is much preferred over lecture. We also need shortened lectures available before class.

It does allow for more focused and interactive class time, however, it seems it does not require an active teaching component during class time, which was a little disappointing.

It forced me to prepare for class beforehand so I could follow along during class.

It helped me retain the information over time instead of memorizing and forgetting it.

It helped me capture information better.

It made a world of difference. I truly enjoyed coming to class every day.

It really allowed me to keep up with the material.

It really helped me learn and understand the material but it was also very time consuming. I understand that we are part of the educational renaissance, and it is very exciting, but if all of our classes follow the format of this class, I do not see how any student could pursue extracurricular activities. I feel like the environment of the School and our impact on the surrounding community would be affected greatly.

It was helpful to learn the basics before coming to class, and then the clicker questions helped to motivate and go over some basic info. The pair and share and student presentations caused us to think about the material more. The end of class quiz made sure I paid attention during class. All of this was very helpful to me, and definitely kept me on track for my studying schedule.

It was impossible to be lost or get behind in this class. I was on board the entire time.

It was like having a lecture and studying for an exam all in one. Overall reduced my course load.

If this were the only class that I had to watch iLAMs for then it would be fine. But if every class changed to this format, then it would be entirely too much work.

Listening to a lecture outside of class was easier because I could pause and rewind. Discussions in class reinforced the material I learned.

I agree minus the student's reading from slides and the inappropriate, too detailed, harder than exam quiz questions.

Most definitely. These methods were way more enjoyable than listening to a 90-minute lecture.

Much better than standard lecture based format. I really enjoyed and thrived in this type of setting. Please change all other classes immediately. This works.

This is not how I learn and I do not think I should be forced to use the little time I have only to leave class without remembering the material any better.

The active learning class time was extremely helpful. It made the material more exciting and easier to learn. Getting two lectures on the same material was very helpful.

The active learning format does require a time investment in order to prepare for class, but I feel like overall it reduced the amount of time I spent studying and I took away more information because we practiced application of the concepts during class.

The active learning sparked more discussion in the class and it was easier to stay engaged.

The format still allowed for traditional lecture style in terms of the iLAM but also allowed for active learning which was helpful.

The iLAMs made it possible for me to be adequately prepared for class so I got the most out of the class once there, and the activities in class reinforced everything I learned from the videos and expanded upon those concepts. Critical thinking was a huge part of this class which I found wonderful because a huge part of being a healthcare professional is critical thinking

The learning style was difficult to adjust to at first; however by constantly being quizzed, I was able to test my understanding of the key concepts and see where I needed to focus my studying.

The material covered and concepts learned were new to me (and other students I assume) making self-directed learning difficult. It is not a social science course, which one can read and learn on their own, with all due respect.

The new style is useful and has potential but could use some improvements.

The way this class was designed helped to hold your interest. Nothing is more boring than slides accompanied by a lecture.

The way this class was set up made it easier to take in all the information and apply it. I feel that if the class were traditional, I would have done worse in the class and not have the ability to recall any information I learned.

This actually helped me learn the material. It took extra time, but the information was reiterated throughout that section of the course.

This class was frustrating, and I did not learn better than my other tradition lecture-based classes.

This class was much better than the prerequisite, and I felt like I got more out of it than any other class I have had because it was so interactive.

This course forced me to apply my knowledge and in consequence I learned more because of it.

This is difficult to determine. It really depends on the teaching style of the professor. In order to make this work classes may need to be shortened or each instructor needs a limit to the amount of time his lectures can take.

This lecture format both taught us the fundamentals of the topic of the day and provided reinforcement of the material. The ability to review what was covered beforehand, and apply this information, meant that the information was retained longer, and less studying had to be done for the midterm exams.

This style of learning was highly beneficial because we were required to come to class already having become familiar with the material. This helped promote more effective discussions during class, as the material was not completely new to us.

While I spent more time outside of class working, it really helped to drive in the material. In addition, the work done outside of class allowed me to study less for exams and still do well.

While it is very time consuming and difficult to keep up, I felt really well prepared for class/tests more so than if I had done the work on my own.

While there are clear benefits to this format for some individuals, I would not say that this is true for everyone. Also, for this particular format to be effective there should be more real discussion during class time - over time the time for discussion decreased and it just became a series of activities to complete.

YES!!!! I would die a happy student if more professors taught this way! It is so much better than lecturing from a PowerPoint.

Yes, BUT I do not want this format for all my classes, unless class time is reduced.

Yes, this is much more effective and allows us to learn so much more material so that we can be better-informed pharmacists. We all have the ability to take information and understand it from a lecture. Using the skills that we already have outside of the classroom allowed us to develop more important skills that we will use the rest of our lives.

Please comment on areas of strength of this course.

A major strength was the iLAMs, they were of good quality and content. I thought the length was appropriate.

Active learning.

Active learning, great professor and TA.

Allowing students to learn the material ahead of time and have it reinforced in class. Watching lectures on my own time is very helpful for me as I am not much of a morning person.

Amazing course design. Truly innovative and absolutely, without a doubt, should be considered as standard course design for ALL UNC Eshelman School of Pharmacy courses.

Clear learning objectives and content presentation.

Clicker questions and daily quizzes. Best parts were the projects outside of class.

Definitely appreciated how different this course was from traditional courses. I enjoyed the class discussion that was prompted by the teaching method.

Discussions in class, clicker questions, the pair and shares really helped solidify the material.

Doing the clicker questions and pair and share helped reinforce the information we learned.

The instructor and TA worked hard to get grades to us quickly and the class was interesting and fun to go to.

The instructor is fast, quick, and effective in returning responses to students or making announcements even over the weekend. Each reply and response is organized and well thought out. The instructor is a role model and a caring and compassionate professor and person. Words cannot express my thankfulness, but I still want to say thank you from the satellite campus for making the course as fun and exciting as it can be. In addition, thank you for lecturing and visiting Asheville campus. Thank you for the efforts that you have done for Asheville students even though we cannot see it, but we can feel it. Thank you!

Encountering the course material multiple times and in different forms really does enhance understanding and retention of the concepts.

I enjoyed the active learning.

The format is a good idea but needs work. Quizzes/clicker questions/think pair share were useful when studying for exams.

The format of the class was great. The iLAMs directly related to the material.

Group work; engaging the students to think critically about issues in drug delivery and collaboratively attain a solution; and reinforcement of material outside and in class. Overall, class time was utilized effectively.

Having a quiz every class forced me to prepare well for the class. It also reinforced the information I knew and helped me focus on what I do not know (or knew incorrectly).

I believe this course allowed you to learn and apply knowledge in many different ways, making you learn the material better, and enjoy class more than usual lecture-based courses.

I enjoyed listening to the lecture ahead of class.

I enjoyed the opportunities to investigate things that interested me and present on them. I loved doing the research for the clinical proposal.

I enjoyed the unique structure of this course. I found myself spending more time on this course than other courses because I felt like I was learning topics that are applicable to pharmacy, and I was very interested. Watching the lectures outside of class forced me to prepare every day and held me accountable because of the quizzes.

I felt that viewing lectures before class allowed me to be better prepared for the material. I also believe I performed better in this course in comparison to the first semester course because I had the opportunity to see the material several times before being tested.

I learned more from the package insert assignment than other assignments. It is a good exercise that demonstrates what we have learned. I would suggest doing more of these but have them answer questions instead of just writing the important facts related to the class. Have them focus on eye drops for the eye section. Injections for the sterile compounding section, and follow the topic with that type of drug to look up.

I liked how the lectures were watched outside of class because it allowed me to focus better and take more in depth notes.

I liked the iLAMs, clicker questions, and pair/share activities.

I liked the way it was set up, where class time was devoted to discussion and not lecture. That being said, do not ever do this kind of class where the lectures are much longer (e.g. I do not know if this class would have been as effective for me if I had to watch 75-120 minute lectures before coming into class for discussions).

I liked the way the course was set up, in particular the in-class questions and the pair and share.

I liked that we were engaged everyday with clicker questions, but I think the student presentations were a waste of time. I would rather be taught by the professor than my peers.

I loved clicker questions and quiz. I also liked iLAM lectures and pair and share because it helped me apply the things I learned. This course was very organized.

I really enjoyed the set-up for this course. I thought that I had a better understanding of the content then I would have with the usual lecture format.

I really enjoyed this course style and hope more PharmD courses convert.

I really enjoyed this course. I loved how it forced you to actually look over the material and come to class prepared because you never knew if you were going to have a graded quiz. I am usually not a fan of the teach yourself method but the instructor did an excellent job making it easy to learn on my own and come to class knowledgeable and well prepared.

I really liked the course and the instructor's style of teaching. I think that I learned a lot from him and the course. I do like the concept of educational renaissance; it works well for me. The TA was great as well.

I really liked the daily clicker questions. These helped me to see how well I knew the material and which parts I needed to review.

I really liked the layout of this course. Jumping from one activity to the next made things more interesting and allowed us to retain information better by reinforcing what we learned in the recorded lectures.

I really liked the outside lectures and then emphasizing them in class. The material definitely "stuck" a lot more, and I found myself studying less for tests and still doing well.

I think this is a great concept. I liked going over the basic concepts before class, so I had an idea of what we would be talking about, and I could come with questions. The clicker questions were a great way to gauge if I had picked out the key concepts from the iLAM. The pair-shares were an effective tool for challenging the class to apply those concepts to a problem or situation.

I thought the clicker questions at the beginning of class provided a good review of the lecture material and allowed me to assess whether or not I had understood the concepts I was expected to learn from the lectures. I liked the instructor lead pair and shares and I thought the pair and share questions posted online provided a good way to review and reinforce concepts learned in the lectures.

I would love to see this learning style carried out in all classes! It should definitely be done again next year with the new class.

If adequate time is spent preparing for class, I really learned the material.

I liked the iLAM videos, think pair-share, quizzes at the end of each class.

iLAMs were very helpful, as were the clicker questions and quizzes.

The iLAMs, in class pair and share, clicker questions helped to reinforce the lecture concepts.

I liked the interactive learning and opportunities (particularly through assignments) to apply what was being learned.

It facilitated self-motivation and self-learning.

It was a very interactive learning environment, and I feel that I greatly benefited from that.

It was nice having so many different resources for studying (clicker questions, iLAMs, Echo's, etc.)

It was nice to have the lectures on hand to be able to view at any time if we needed to review a certain topic.

Knowledgeable professors that have had actual real-life experience.

Many resources available.

Material was very relevant to what we will be doing in the future. The way of presenting it by watching lectures beforehand and then reiterating during class was pure genius.

I liked the organization of the lectures. The slides are organized and do not contain too much information, concepts are explained clearly and to the point in the iLAM, engagement from students, books was excellent for clarification of concepts, professor cares, professor is available for individual help, loved the clicker questions and I thought they were well prepared.

Organization, different lecturers, clicker questions.

Organization, iLAM, lecture style, learning method.

Outside of class lectures and activities done in class.

Package insert, iLAM, pair & share, in class clicker questions.

Pair & Share. Reflective (online) pair & shares. Active learning. The instructor is great.

Props to the instructor for trying something new. I am glad it worked for most people.

Reiteration of material from lecture discussed during class.

Self-learning at home and then applying them in class was different and helpful.

Structure! The iLAM, pair and share, and clicker question format was very successful and beneficial for me!

The active learning activities certainly helped reinforce what was taught in the iLAM lecture. This meant less work for us when it came time to study for exams, and the information was retained for longer.

The active learning was great.

The class was very informative and promoted the learning of concepts (for the most part, i.e. memorizing product names/indications is NOT learning) over simple memorization. The instructor is a great teacher and he should try to use his knowledge and expertise to better guide the lectures. The student presentations were absolutely worthless though, especially if one already did the reading.

The design of the course forced me to stay on top of class materials. The short videos that we watched before the class were effective. The overall design (clicker questions, quizzes, discussions) of the class was conducive to learning.

The format of this course "forced" me to keep up with the material so I appreciated that.

The format was excellent. New, exciting, and I was not lost in class.

The format was very engaging and helped me remain focused and really retain concepts.

The iLAM videos were easily understandable, and the slide sets were also well organized and easy to understand.

The iLAMs and clicker questions.

The iLAM's were very beneficial to me, because I was able to take pause the lecture and take notes when I needed to. This allowed me to keep up and get all the important information. I also really liked the clicker questions in the beginning of the class followed by the quiz. This really did help test me on the knowledge and encouraged me to keep up with course work more efficiently.

The instructors were very knowledgeable, and the content was interesting.

The learning model takes some time to get used to, but really allowed the course to succeed and demanded higher performance of the students. The instructors, including the TA, were all very prepared and enthusiastic.

The iLAMs were every good because it helped to be able to pause lectures and absorb what said and take notes.

The major strength of this course is its applicability to my training as a pharmacist. I believe that in order to be a drug information expert, I need to be aware of how the formulation, dosing route, and physical/chemical properties of a drug may affect its behavior.

The overall active-learning set-up was successful.

The quizzes made sure I was up to task.

The setup of this course was phenomenal. Having the iLAM lectures outside of class and the in-class activities more hands-on and involved is the way to go. I feel that many students get more out of watching breeze links/iLAMs and being able to rewind etc. and also, listening to lectures in class is very difficult when other students are distracting (watching YES network etc.).

The strength lies in the discussion and actual learning that went on during scheduled class sessions.

The style of the course was great! It allowed me to learn the material better by watching a lecture outside of class and doing activities in class.

The way that the course was taught and designed was extremely effective and efficient. Also, you cannot have a good class without a good professor and the instructor is an excellent professor and mentor.

This class was, as I said before, the most effective course I took this semester. I barely needed to study for the final exam because I felt like I had truly understood the material all along.

This course was great. I really enjoyed the active involvement. Loved it. We all ranted and raved about how great the class was and how much we loved it. We really appreciated all of the hard work that our instructor put into our learning and the future of the School.

Reiteration of important points.

Very engaging for students. Instructor is clearly passionate about the material and wants the students to do well. Course follows a logical progression.

Very organized.

Very well organized and information was presented in an interesting way.

Watching the iLAMs prior to coming to class really helped build an understanding of the material and the in class exercises helped solidify that understanding.

Well-prepared course that was well thought out and organized. The practice questions and quizzes were great for my learning process.

What is your overall rating of this course?

Although the course was extremely challenging for the credit hours awarded, I think that the knowledge I obtained was tremendous in comparison to other courses.

Although this course was very time consuming, it was very interesting and pertinent to what we should be learning for our future.

An overall great class!

At first I thought this class layout would be time consuming and not helpful. However, after about two weeks, I began to LOVE this format. This is now one of my most favorite classes, and I feel like I have learned so much (which is not usually the case in a simple lecture class). After a standard lecture I went home and forgot all of the information I just learned until the test. However, with this format, I watched the video the night before and then class reinforced everything. Once it came time for the test, I only had to review the information I had already learned. It is fantastic!

At first I was hesitant and somewhat against the new learning and teaching methods that were applied in this course. But as the course progressed, I found myself retaining more than I had in prior courses that used traditional learning and teaching techniques. This course was definitely a unique experience and overall I felt it was beneficial for increasing my overall knowledge of concepts covered in the class.

At the beginning of this semester I did not think that I would like this course format. However, I LOVED it! I got more out of this course than any other this semester. I also think that the course was VERY well organized. Other classes did not have accurate PowerPoint's or sometimes were not given PowerPoint's till after the lecture. This class was not just thrown together and it really showed. The instructor's preparation definitely paid off and was much appreciated.

Everything was very clear, however the readings were a bit confusing.

Great balance of out of class and in class projects and involvement, but I do not know if this course model would be possible if we had to do it for every class- there just would not be enough outside class time to complete it all.

Great course! Hope to have more like it next year!

Having to prepare so much before exams was a little exhaustive and tiring, especially by the end of the semester.

I believe that the "guessing games" without having a proper foundation in the key concepts is non-advantageous and essentially a waste of class time that could be used to discuss what the iLAMs do not cover so well.

I believe the format of this course is a very ambitious one. I think the "idea" of the course format is very inventive and helpful however it is so much work. If every class were like this one, I would have no time to do anything but pharmacy. Having to watch lectures and read beforehand, on top of everything else I do normally for my classes, is so much work.

I enjoyed the course. I like the topics that we discussed, and I feel like at the end of the semester, I can look back and really see how much I have learned about drug delivery systems. I am iffy about the way the class was taught. It has its ups and downs. Many times it was really difficult to put in the time before each class to watch each lecture and understand the topic well enough to take a quiz on it the next day. But I do feel like having the iLAMs available and at least having an introductory knowledge of the topic of the next class was beneficial and probably the reason I was able to understand this course information better than others (that, and it was more interesting overall). I see how this class format can be beneficial, but I do not like it is realistic for every course to be approached this way.

I felt that this course required too much of our time. I would spend time out of class watching the pre-recorded lectures and completing the assigned reading. Then I would spend time attending the required lecture in the classroom. Then I would spend more time studying for this class' exams. Compared to a traditionally taught class, I would spend on average 3 hours less per week preparing for that class. I feel that I have learned just as much than I do during tradition lecture style courses.

I loved the setup of this course. It was much easier to learn/understand the concepts compared to other classes with traditional PowerPoint lecture format. I really liked the iLAM videos, active participation, and clicker questions - very helpful in learning the material. Also, I enjoyed commenting on pair and shares, and writing the clinical proposal (good way to think about the topics we discussed).

I really enjoyed this course. I think it would be unreasonable to have all classes like this, but think it is a good idea to employ this teaching method in a few others.

I really hated the setup of the class. I am not a huge proponent of the educational renaissance. I definitely enjoyed the material learned in class but thought it was unfair to do all the learning on our own and then come to class only in fear that we had an exam. Class seemed pointless in that I learned everything discussed already though the lectures online. I really liked and understood what we learned, and the instructor is awesome, but I just thought it was a horrible set up for class. I feel like it is unfair for a student to have to spend that much time preparing outside of class and still be required to come in and do the same thing in the classroom. There should have only been four class periods held for the exams.

I thought that the course was very clear and easy to understand, but I still learned a lot. I love a class that lays out the material in an easy to understand format because then it is not frustrating to learn and understand.

I was skeptical of the course at first, but I loved it!

I would like to have more courses like this in the future.

It is phenomenal! I will miss this course and hope to have our other future class like this class or even better. Thank you for this great experience.

It took a while to get used to the iLAM.

I love the educational renaissance on teaching style.

One of my favorite classes this semester.

One of my favorites so far.

Overall, I liked the format for the course. I watched all the lectures before class. I thought they were well done and did a good job of presenting the material. I did not always do the assigned reading before class. Depending on what else was going on in other classes, I often did not have time to both watch the lectures and do the reading.

Really enjoyed the course.

Should really think about combining this with the prerequisite. I feel the material could be condensed into one semester.

The best course I have taken in pharmacy school.

The class sessions where the quizzes are not graded should be utilized for the instructor to briefly summarize the objectives of the iLAM and clear up anything that the students seemed to have trouble with, or that the instructor sees as most important.

The clicker questions and pair and share were good. I am not sure if giving 20 points for a pair and share discussion to the class made sense because of the incredibly limited number available. Right now, although I did not do the presentation, I think the 20 points would likely change my final grade from a B to an A. I do not mind though because I do not feel that I would have 'earned it' because it was due to the extra points. Minor critique.

The course designed helped me to retain information longer. Repetitive quizzing is burdensome for every class, but necessary for longer retention. However, it is most likely not possible to apply this format to all pharmacy classes. It is not possible to spend this much time outside of class for six classes, unless in-class time was cut down significantly.

The course itself is a novel idea, while not perfect I think it was very well executed for it is first time in action.

The course was taught really well, but the fact that I barely got a B after ALL the work I put in shows something is off.

The course was very well planned out, and followed a good progression. Watching lectures beforehand and discussing them in class was a great way to learn the material.

The course was well designed and really enhanced learning. It did take a lot of time out of my schedule to do all the required readings and iLAMs. Sometimes it was harder when they fell on a week that coincided with a lot of other homework.

The new learning style took time to adjust to but I felt like I retained information/key concepts after I was tested.

The outside of class lectures was great and definitely aided in my ability to focus and remain on task in class.

This course greatly improved my knowledge and understanding of the course content. I learned the most in this course and feel the most confident on this course's material.

This course was excellent. I was not excited about the "active learning" component when I first heard about it, but now I am a huge proponent! I thought I would have to spend significantly more time on this class than on other classes, since I had to watch the lectures beforehand. However, this was not true. Since I was actively engaged throughout the semester and the material was solidified through active learning, I do not have to cram for exams and always felt prepared.

This course was the best course I have taken at UNC so far. It was the most organized and most engaging!

This is the best class that I have ever had, and I can honestly say that I have learned and **RETAINED** more in this class than any other that I have ever taken.

This was my favorite class this semester!

This was one of the worst courses I have taken at UNC yet. The instructor is an articulate speaker, but he did not stick to his promises when introducing this "educational renaissance learning" experiment. I witnessed him saying that a student group that was presenting would **NEVER** have to go twice and yet that happened. Additionally, he said he would make the tests "easier" if we paid attention and did the prep work. Look at the scores from Test #3 - I do not think so.

Tried to do too much and the expectations of already busy students was beyond reason. Added a lot of stress to our already stressful lives...

Truly enjoyed the class.

Very great new and innovative way to learn. However, it is a demanding way to learn and requires diligence.
