



*a podcast about
how we learn,
how we teach,
and how they overlap*

Episode 6: Studying = Interacting With The Material

[Theme Music]

Adam: Hi, I'm Adam Sanford, and I'm an academic life coach and professor in Los Angeles.

Dinur: And I'm Dinur Blum, I'm a college professor in Los Angeles. And this is Learning Made Easier, a podcast where we discuss how we learn, how we teach and how they overlap.

Adam: Welcome to Learning Made Easier! And here we are with episode 6. Today we're going to talk about how "studying" actually means "interacting with the material."

Many students and teachers have misconceptions about what studying means. So in this episode, we're going to go over some different ways that you can study that go beyond just "reading and rereading the book."

Dinur: So reading and rereading is the way a lot of students are really familiar. It's what they've done throughout high school. It ends up being how they try and memorize and trying to cram everything the night before an exam.

But as teachers we know that's not very effective. We know that that's not a very deep level of understanding, when students are just reading and spitting back what we've told them or what they've read. We want to encourage alternate methods for students to use and for teachers to encourage in their classrooms, but in addition to reading books or reading the articles that we assign, we can have our students watch videos, we can have them listen to podcasts, and there's no reason that you can't do something with a little humor.

I tend to use a lot of John Oliver clips for my criminology classes, because he does a lot of work on the legal system, and I think his team delivers good information and does it in a really funny way, and so I encourage my students to listen to some of those materials.

Adam: And you can create your own too. You might have noticed, in some of our earlier podcasts, when I get excited I tend to start talking really fast. My students used to complain about that when I would teach in person in the classroom. I would teach, and I would be talking, and my lectures would speed up, and speed up, and speed up, and speed up, and I wouldn't be aware of how fast I was talking. So the way I short-circuited that was, I wrote scripts that went with my PowerPoints, and then I did a voiceover lecture - where they still got the PowerPoint, but they

had my voice as a video of the PowerPoint.

And I put these up on YouTube and then embedded them into the learning management system. And I've had students tell me that they've had their parents think that they were listening to a podcast, and why weren't they studying?

And the thing is, this still allows you to get the stuff across - but it allows the student to pause you, to rewind you, to listen to you again if they need to.

You need to put captions on the videos, and that's not hard. There's a way to do that in YouTube, and we may do a podcast just about that - about how to put your lectures on video, so that you can use them. You can give them videos that are your lectures, so that instead of doing a lecture in a classroom, you can get them to do an application activity, where they take what they learned in the lecture, and then you give them something to apply it to. And that creates deeper learning.

Dinur: And one of the things that Adam said that I thought was kind of amusing was that the parents asked, "Why aren't you studying? Why are you listening to a podcast?" A podcast is a great way to learn about something, because a podcast is one or two or however many people really going in depth on things they know and they care about. If they didn't care about it, they wouldn't be making these podcasts.

Adam: Right.

Dinur: So if you find podcasts that talk about something related to the class that interests you, by all means listen to it. I have students in my law classes who listen to a lot of true crime podcasts, and they'll tell me about things that they were able to relate from the podcast back to our lectures and vice versa.

Adam: Yeah, my husband loves the My Favorite Murder podcast. He calls himself a "Murderino." But there was one time when they were talking about this one serial killer, and I was teaching criminology, and I said, "So this is optional, you don't have to do this, but episode blah-blah of the My Favorite Murder podcast talks about a serial killer, so you might want to go listen to that and see: can you connect the theory that we're talking about to this guy's case?"

And I had so many students say to me, "Wow, I would never start you listen to a podcast." If the information is relevant to the class, you can use it. It is not just "read a textbook," or even for some history classes or some sociology classes "read the original texts." It's also "interact with the material in other ways."

And there are a lot of different ways to do this. You can make notes on the material that you've read or watched or listened to. You can rewrite your notes - and we're going to do a separate podcast about that later, because that's an in-depth idea. But there are a bunch of different ways to rewrite your notes, and I've had students who said "I thought rewriting my notes was a waste of time," and I said, "are you interacting with the material when you rewrite your notes?"

"Oh, yeah."

“Are you studying?”

“Oh, yeah!”

You can make flashcards, and there are tons of different ways to use flashcards. This is why I really recommend not using Quizlet, and using actual, physical flashcards, because you could go into a study group and play Go Fish with your cards. You could play a game that I developed, that I'm still writing an article on, called flashcards Against Humanity.

You could play... I call it... and there's another game that I developed with a class of students called “the concept card flashcards game,” where you're in a study group, and there's a pile of concept cards. And so you draw a concept card, and then you draw a flashcard - and the concept cards are things like “act out the idea,” or “draw it on the whiteboard,” or “write a four-line verse about it,” or “describe it without using the word and see if your classmates can guess it” - and so there's like 10 or 12 different concept cards, or activity cards, where you take your flashcards and do something with it.

Another game you can play with flashcards is Three Random Categories, and I've used this with my students, where I tell them, “okay, take your flashcards, and I want you to sort them into ‘things that belong outdoors,’ ‘things that belong indoors,’ and ‘things that are in both places.’” And so, if you're using, say, flashcards for your American History class, and you're looking at the Revolutionary War, well, then, the Battle of Yorktown would be outdoors, and George Washington would be both outdoors and indoors, and the Declaration of Independence would be indoors, right? And it gives you a different way of looking at the material, and it might stick in ways that it didn't if you just read about it. I really am big on flashcards, flashcards, flashcards, because there are so many things you can do with flashcards.

Dinur: Adam's big on flashcards. I'm really big on the idea of students teaching the material to someone else and on studying in small groups. I actively encourage my students to make small study groups to work on their study guides when they have exams, and to meet somewhere like a Starbucks, or a small diner, or just somewhere quiet but that's still social. It's a little bit more relaxed, because it's a lot easier to talk through material when there's food around, or when there's coffee, than when you're stressing about it in a small group.

But I tell them to study in small groups, rather than individually, because by studying in small groups my hope is that they're going to talk through the material with one another, and that way, when there are areas where people aren't sure about the material, or where there's disagreement, that makes those areas a lot more concrete. And then they can come to office hours, they can email me, they can ask me questions, I'm, like, “sure!” and that way any issues are kind of cleared up, no points are lost, no status is lost, no face is lost for them.

Adam: And I will say today, too, Dinur, that I like having students work together. That's why I said “flashcard games.” Technically, you could play flashcard games with yourself, but it's not as fun as when you're with your whole study group and you're all playing from a common deck that's made of all of your flashcards, right? The other thing that really works - and there's been research on this - students who quiz themselves do about 10 percent to 12 percent better on exams than students who don't.

And one of my mentors, Gretchen Wegner - we're going to see if we can get her to be a guest on this podcast - she developed what she called "the Study Cycle," and part of the Study Cycle is "check and see if you know what you studied," because all the putting it in your head doesn't do you any good if you can't pull it back out when you need it. And so if you make quizzes, you could - you can use flashcards to quiz yourself, but you can also hand the flashcards to someone else and say "quiz me, let me see if I can do this without holding the cards in my hand, without looking at them."

You can make yourself a set of self-quizzes. One of the ways that Gretchen Wagner talks about is a T-chart, which is a very common way to do this. You take a piece of paper, you fold it in half long ways, and then you write your questions on one side of the crease and you write the answers on the other side. So number them, because the answers and questions might not be the same length, and then you put that aside for a day. Then you put a new piece of paper over the answers, so that you can't see them, and then you answer questions and see how many of the you can answer. And then you can check yourself, and anything you didn't get, you need to find a new way to study it, because whatever way you used to study didn't work. So if you read the book, and you missed three of the ten questions on your self-quiz, than those three things - you need to find a different way to study them.

Another thing you can do with quizzes is, you can have everybody in your study group write a quiz, a ten-question quiz - "everybody write five multiple-choice and five true/false questions on this module before we meet next time" - and then you sit down, and everybody hands their quiz to the person on the left, and then you take the quiz someone else wrote.

And then you hand them back and the other person grades them. And then you talk about ones you missed as a group. And here's your group work, and where they talk about "OK, everybody missed the question on anomie. Let's look that up. Let's find out. And if we can't figure it out, let's email Dr. Sanford and find out what the heck this anomie thing is that doesn't make sense to any of us."

Dinur: And notice that one of the big keys in all, this is that nothing is lost. You can bomb your peer's quiz and I promise, it will not hurt your overall grade. And what that does is, it lets you know what areas of the material, or what sorts of questions, you're struggling with and what you're good with. And it's important to know both! And it lets us, as teachers, know where to help you figure out material, where to figure out a certain skill because you're doing this, and that it acts as a conversation with us. And the conversation is: "here's the material we've gone over, here's what I get, here's what I don't."

And it's on us, as teachers, to make sure that you understand more of the material today than you did yesterday. And it's on you, as students, to put that effort in. We will give you the tools you need to succeed for us, but you have to put that effort and that time in.

Adam: Yeah, I - often in the first day or two of classes, I will ask someone with a baseball cap - usually a boy - to come up to the front of the room. I'll ask him if it's OK if I touch you? I just want you to be my demonstration. And I hold up the book, and I hold it up, like, open, you know, like it looks like a taco. And I say "This is the Taco of Knowledge. So it's my job to open your head," and I

lift up the hat and like pretend to pour the Taco of Knowledge in your head. So I say, "is it my job to open your head, dump all this information and close your head and hope it sticks?"

Then they'll say, "no," and I say, "Right, so it's your job to eat the taco. I can give you the taco, but you have to eat it."

I've had students mention that Taco of Knowledge, where they realized it is their job to eat it. It is their job to find a way to eat it all, and it's big damn taco, but it doesn't mean that they can't eat it.

Dinur: And one of the things that I really wanted to highlight, for both teachers and students, is you notice that Adam and I talked about a lot of different ways of interacting with material that wasn't just reading. Well, for students trying to use some of these ways, see if that helps you understand the material better. See if it helps you both short term - an upcoming test, medium term - the class as a whole, and long term - throughout your academic career.

For teachers, we have to give students that opportunity to study in ways that aren't necessarily conventional, and may be very different from how we study, because learning is a very individual process. It's on us to offer tools. It's not on us to decide which tools students use.

Adam: And again, we're teaching students, not courses. And if you're so focused on getting the material to the students, you need to realize that each student is going to need a way. Maybe one student is a wizard with flashcards, and another student really needs to rewrite their notes as a pictogram, so that it makes sense. I mean, my older child, I mentioned, is an artist. When they took their history class in high school, they hated history - hated it! And they got an IEP, because they have some disabilities, that they were allowed to take their notes in any way they wanted, even though the teacher wanted to take notes in same way everybody else did. The teacher had to give in.

So my older kid, who is now an adult, started drawing a cartoon of each class. Where it was the Battle of Yorktown, they would draw like a 5-panel or 6-panel cartoon about "here are the things that we need to know about the Battle of Yorktown." And at the end of it, they had a comic book that was just all the stuff... and it was all draft, you know, and it wasn't even like really good, it was just sketches and stuff - but the fact is they could turn that into a "How to learn American history in high school," and it would probably work. I mean, it worked for them to study - they got A's on their exams, and so if that's the way that student needs to learn, you need to be flexible about that. And a lot of teachers are like, "Well, I want you to learn the same way I learned." Well, that's nice, but they're not you, so you need to give it up.

Another thing that teachers can do is allow the students time in class to create things like self quizzes, or flashcards, or other study tools. I can't stress this enough. If you give the students things they can use as study tools, or let them have the time to develop things to use as study tools, they will use the study tools. All right, it's if you make them do it all at home, with no guidance, and they're kind of stressed out, and "I don't know how to create a self-quiz," maybe they need you there that first time. You know, "let me walk around and see how you're doing. OK... Do you see how this multiple choice question isn't really going to help you, because you've written four answers, and you know some of them need to be plausible in order for this to work?" Even if that's so, then you start teaching how a quiz question is written or a test question is

written, so that they can write their own and understand what they're doing.

Dinur: So one of the things that I'm a big fan of, I've mentioned it before: creating small study groups. And by small, I mean probably not more than four - tops, five, because if you go bigger than that, the groups tend to splinter off and start becoming less productive. You want to strike that balance between doing good work and realizing that, yeah, it's human nature to want to slack off. And you have to account for that. You have to build that in. But in order to kind of control that, you want to study group to be maybe two, three, four, or five people tops.

So for teachers, you can either create study groups on your own and assign students randomly, or you can allow them to choose their own groups. They are adults, but you want to give them credit - maybe make it part of a small assignment, something low stakes, but as long as they can prove that they showed up and that they met with their study group for X amount of time, give them credit for it. Because that's effort that they took to work on your class and your material, and we can reward that with a good grade, even if it's not weighted very high.

Adam: One of the ways I did it when I had the students pick their own study groups was, I had them send me the names of the people in the group, and a name for their group, and then I created a group area on Blackboard - on the learning management system - where they could exchange emails and talk about it. And I said, "Each time I see you post something about 'here's our study group, here's who showed up, here's what we did,' those folks are going to get one step towards an extra credit." Like, you had to be in the study group five times a semester, and if you did that then you got that extra credit assignment point, which was going to bump your grade up a step.

And it's really a powerful way to do it, because then they could say, well, "we're just sitting around in the study group, we don't know what we're doing." But if they have to report on it, if you give them a way to report on it, and you give them some credit for it, either extra credit or basic credit, then they will write up reports about "this is what we did in study group: first we exchanged self-quizzes we'd written, and then afterwards we graded them and then we went over them, and we found out that everybody's having trouble with anomie, so we're going to go and see Dr. Sanford in his office hours. But we also planned to do this and this next time, and we played a flashcard game, and it was really fun."

That's enough for me to know John, Judy, David and James were all there, and I can give them credit, because they went to their study group. And that's one way to track the study group. It's also one way to keep a record of what you're having your students do, you know. You could show administrators - your boss - "hey, look at what my students are doing."

And then, the last thing is to find or create other methods of learning the material besides the textbook. And this may require some front work. I mean for me, prepping is always... you know, it's not that I stress out about it, but I know it's going to be a lot of work, because if it's a brand new prep, I have to record lectures for every module, for every lesson, and that takes time. But the nice thing is if you record those lectures and you don't put in "so this is for Fall, 2019" - no, if you just say, "So, this is for Deviant Behavior, SOC blah-blah-blah, and this first lecture is going to be about blah blah," and you never mention the time period that you did it, then they become timeless, and you can do them again and again. You can use them over and over again, as long as

you keep them topical but not time-bound.

And so you can also create podcasts - you can find podcasts. When I teach methods, and we have to use the SPSS statistical analysis program, I actually go to YouTube and I just find, "Ok how to do univariate analysis in SPSS," and I find a good one - and I don't create my own. I share that with the students because it's on YouTube: "Hey, go watch this, here's your lesson today."

And so then, when we get to how students can use this information, with all these different ways of studying, the first thing is to plan your studying by using a different way of interacting with the material in each of your study sessions. Never repeat a method until you use them all at least once. You will find that some kinds of information stick really well when you've read the textbook, but some of it doesn't stick until you've rewritten your notes, and some of that you've got to write flashcards and use them, and some of it you need to go and work with a group, because it's just not clicking until someone else explains it to you or you explain it someone else.

So the more methods you use of studying, the more variance you give yourself, the better you'll get. And so try to schedule your study so that you never repeat a method until you've gone through the whole list of methods once.

Dinur: And I also recommend interacting with the material in different places, like physical places. Maybe you read in your room, or you read in your living room, but on the way to or from campus, on the way to work, you're listening to podcasts. Or change up who you're studying with. Maybe read solo, or quiz each other in groups. And the whole idea is the more variation you give yourself, the deeper the knowledge is going to stick, because you've had to interact with that - not only with different people, but also in different locations.

Adam: And the thing about the different physical locations, and they've actually done research on this - and this is where we're going to finish up - they've done research on this, that if you study in the same place every time, your brain makes an association with where you learned material and thinks "that's the only place I need it." Because your brain is lazy. Your brain doesn't want to have to do extra work. So what you have to do is force your brain to break the association between your nice student desk with the pink student lamp, with no music and silence. And just, you know you're very focused, and then you get into the classroom, where there's a fluorescent light going "bzzt," and there are people rustling paper behind you, and people are scuffing their feet, and you're trying to concentrate, but you're not at your desk with the pink student lamp, and your brain's like, "I don't need this information!" And so you can't remember it for the exam.

But if you study at your desk one day, and then you study at Starbucks the next day, and the day after that you go study in the library, which is a different kind of quiet - it's not the same environment as your desk - and then you study by, you know, maybe on a day when it's not raining, you sit out on the campus green and you study under a tree, and then you study at Denny's or the local diner, and then you study in a study group with some of your friends at another coffee shop. After about five or six changes of location, your brain gets the message: "oh, I need this everywhere," and then you're able to actually pull it out of your head when the time comes to take the exam.

And so that location thing, both different locations with different people, but also different

physical locations, you know, the realtors were correct, it really is about location, location, location.

So that said, we're done with Episode 6! And when we see you next time in Episode 7, we will be talking about the tradeoff - and the tradeoff is about "which one of these things are you going to give up, so that you can be successful? Because you have to give up one of them."

Dinur: Being fast, getting the right answer, or being low stress. You can have any two out of the three, but there's no way you're going to reasonably have all three - so which one are you going to trade off?

Adam: And we'll see you...

Dinur: ... next week!

[Theme Music]

Dinur: You've been listening to "Learning Made Easier," a podcast about how we learn, how we teach and how they overlap.

Adam: We want to say thank you to all of our supporters on Patreon, who make this podcast possible.

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Adam: And we look forward to seeing you next week!