

Transcript

Episode 141

Study Courses Supercharge Anatomy & Physiology Success

The A&P Professor Podcast

Contents

Introduction.....	2
One of Two Success Courses.....	2
Setting Up the Supplement Course	5
Structure of Class Sessions.....	9
Grading	18
Does an A&P Supplement Work?	19
Parting Wisdom.....	24
Staying Connected.....	33

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Introduction

Kevin Patton: [0:01] The motivational speaker and former legislator, Les Brown, once said, "Help others achieve their dreams and you will achieve yours."

Aileen Park: Welcome to the A&P Professor, a few minutes to focus on teaching human anatomy and physiology with a veteran educator and teaching mentor, your host, Kevin Patton.

[0:22] Music.

[0:29] In episode 141, I describe a student success course that I developed to accompany the A&P1 Course.

[0:36] Music.

One of Two Success Courses

Kevin Patton: [0:46] This episode is part of a two-part series about two courses that I developed for student success related to A&P.

[0:58] Now of those two courses, the first one that I discussed is called Pre-A&P, Foundations in Science. And like its name implies, students take that before they take the regular A&P course, before they take A&P One.

And I discussed that in episode 140. And by the way, in episode 140, I made a mistake on the effectiveness data that I reported.

I stated that students who took my pre-A&P course performed at a half a letter grade higher in A&P1 than students who did not take pre-A&P.

However, it's actually 0.75 or three-quarters of a letter grade bump for students who took the pre-A&P course.

So it turns out I kind of downplayed it, I guess, by making that mistake when in fact the outcome is even better than I first reported.

I did update the notes on the episode page, but the audio has not been updated.

So I just wanted to make that clear before we go any further.

I'm going to occasionally refer back to episode 140 where I talked about pre-A&P, in order to make comparisons and contrasts between the two courses.

So you may want to go back and replay that episode before you listen to this one.

[2:22] Now that was a long, long, long episode, so I'm thinking you may have missed a few key points the first time through. But it's up to you. Ignore my advice at your peril.

[2:40] Now to quickly review where we're at in things, I mentioned last time that I always thought there's probably two things that may be missing in our A&P students that stand in the way of their success. One is subject preparation. That is, do they really remember, are they really competent in those concepts of science and chemistry and basic cell biology and metabolism and body organization and genetics and all of those core concepts that we want our students to have before we start our story of human structure and function in the A&P1 course. That's one of two things. The other of the two things that I was thinking about is, aren't they kind of missing some learning skills? Aren't they maybe a little bit behind on reading comprehension, at least at the level they need to be for A&P? And maybe they have some listening and note-taking work to do that maybe works okay in many other courses, but once they hit A&P, they kind of come to a screeching halt because those skills aren't really good enough.

[3:58] And what about the skills needed to acquire and use vocabulary?

Isn't that something that is really, really needed in A&P, especially from the get-go, not something that can kick in halfway through?

[4:11] And are they good at active studying and practice? Or are they more used to doing just passive things, like staring at the book, staring at their notes, maybe highlighting a few things now and then, and that's about as active as they get.

Well, maybe they need more skills for active studying and practice, and maybe they need better problem-solving skills, and maybe they need better skills at just managing the process of taking a test and reducing their anxiety and knowing how to analyze test questions and knowing how to process the tests after they get them back and they're all scored and get their feedback.

[4:51] So, those learning skills, which I wrapped all that up in one package, calling it learning skills, that's the second of two things.

So subject preparation, that is at least partly, I think pretty fully, answered by my pre-A&P course, which we covered in episode 140.

So now we're in episode 141, and we're going to focus on that learning skills part, that, other half of what I think is missing for success among our A&P students.

So how did I address those learning skills? Well, that's what we're going to focus on in this episode, and I'm going to talk about a course I developed called A&P One Supplement to address those learning skill gaps.

But before we get to the meat of it, I just want to talk about a couple of things that are probably going through your head right now.

They would mine, and they did at one time, and that is, why two courses?

Why not just have one course, let's say pre-A&P, what we discussed in the previous episode, episode 140?

[5:58] Why not in pre-A&P not only cover those basic core concepts we want students to know, but, why don't we use that course to develop these learning skills?

Well, that's a really good question.

That can be done. And if you want to try doing that, maybe you have tried doing it, and I'd sure be interested to know how that worked out for you.

But as I and my colleagues went back and forth and debated this, we finally reached the conclusion that those learning skills are really best learned when you need them.

If you take a course in learning skills, but you're not really jumping into the stuff that you really have to learn, then you don't really learn how to apply them.

[6:46] Not only is it hard to apply them in general once you get to them later on, but there are some specific concepts that maybe require some special handling in terms of how to study for them or how to even begin to understand them that you wouldn't have known about back when you learned about study skills.

So I'm not against study skills courses. I think everybody should have good study skills course in high school, but if not in high school, at least at the beginning of their college studies. But what I'm saying is in A&P, I think that there's a higher level of study skills that are needed compared to courses students probably would have taken before A&P, and that those study skills are best learned while they're taking A&P, not before they take A&P. Now, Now the core concepts that we want them to have before they enter A&P, well it makes sense you do that before A&P.

[7:45] If you do that alongside A&P, then it's probably a little too late.

I mean, that's kind of what we do in A&P anyway, isn't it?

Try and brush them up on stuff they should have had before while we're also trying to move ahead into new concepts that they're learning for the first time in A&P, or at least we're expanding on for the first time in A&P.

So that's why I decided to go with two courses, a pre-A&P course to focus on the subject preparation because, well, preparation ought to come first.

And then the learning skills I wanted to focus on alongside A&P1 because, well, that's when.

[8:24] We really realize we need those learning skills.

That's when we really believe the instructor that study skills are needed and this is going to be a really rigorous course and you better pay attention.

Sort of answering the basic question you probably have jumping into this. Now one other thing that may have occurred to you, especially once I mentioned the title of the course, A&P1 Supplement.

Isn't this just SI? You've probably heard of SI, right? That's Supplemental Instruction.

That's a model that uses peer learning, peer-to-peer learning, to help improve retention in high attrition courses like A&P and chemistry and physics and all kinds of other courses that are very rigorous courses that often do really hit beginning students really hard and they I have a hard time coping with it.

I think SI is a great model, having peers helping other students get over the hurdles and keep going.

And that SI model often works very well for students.

[9:32] But this is different. It's not SI, so don't think about SI when you're thinking about this.

This is different, and I think it also works very well. Eh, listen to my story and see what you think.

Setting Up the Supplement Course

Kevin Patton: [9:54] Now that we know what the AEMP One Supplement course is for, that is to brush up and fine-tune and expand learning skills that students need if they want to be successful in AEMP, and actually in courses that go beyond AEMP.

So we know that's the goal. We know that that's what we want to accomplish.

So let's go through some of the mechanics of how I set up my course.

[10:17] First of all, it's a one credit class. Now, you may remember from episode 140 that my pre-A&P course was a one credit course, but it was developmental level credit, meaning that students paid for one credit of tuition.

It means that they had one credit of developmental course on their transcript, but that did not get calculated into their GPA.

It did not go toward any kind of credit for a degree, for graduation, for a degree or certificate.

The supplement course, on the other hand, was regular academic credit.

So it was one credit, and I'll talk about how much time was spent in class in a few minutes, but it was a one credit class, that could count for graduation if you count it as an elective.

But it was not listed as a requirement for any degree, not even as a prerequisite for anything.

So that's, so it's a short class, meaning it's not as big as a three credit class, like maybe an A&P lecture course.

It's more like an A&P lab course, which also often is a one credit course.

[11:38] Also, remember that the pre-A&P course, when I described that, I described it as being a pass-fail course. This is not a pass-fail course.

You can get an A, B, C, D, or F grade in this course.

So just like, you know, A&P One Lab. Another thing is, is it's optional.

So not every A&P One student takes the A&P One supplement course.

[12:02] They can if they want, and they may not. Now you might think, okay, well, how do we get students into the A&P 1 supplement course?

Well, the ones that really, really need it, they're going to hopefully be counseled into it by their advisors.

And at our school, we have advisors that are specially trained for the healthcare professions.

And so part of their job is to really emphasize to students that these courses they're going to be taking are not generally run-of-the-mill courses.

College courses, just like any other college course, they are particularly rigorous compared, to at least some other pathways that they might be taking.

So they would encourage our students to take the supplement course if they expressed in any way that they might need some extra help.

[12:58] Another thing is that we found, that I've found as I taught the courses, a lot of times you didn't have to do any of that counseling of the higher-level students, that is the students that were coming in with already good skills in learning because one of the skills they learned is get all the extra help you can, that you need extra help, that that's the way to do it, that's the way to be successful is to get extra help.

So what I found is in the A&P1 supplement course, I would often have this dichotomy of students, students that really struggled in school in general, and then these other students who really excelled in school in general.

And you would think that that's kind of hard to manage that, and like how do we get to where we need to go with two such very different groups of students, but it turns out that's an ideal combination.

A lot of what we did was collaborative. It almost is kind of like that SI model that I mentioned before, that peer learning model, where you have better, more practiced, more accomplished students, students, well, in SI that may have already taken the course before, and they're helping the newer students be successful in that course.

Well, here, it's not so much students that have taken the course before, but students that have already developed some learning skills. So, in a way, it's kind of like that.

[14:25] So, it's not the SI model. I don't want to lead you down that road of mistaking that, but it's a little bit like it in that sense that you have the better students and the struggling students working together.

And that's going to help the struggling students. But as we all know, as faculty members ourselves, when you teach something, you learn it more deeply.

[14:48] So, that's kind of what we're doing in the A&P Supplement Course.

Now, as I think I've been implying all along, and you may have already gathered, the A&P supplement course is taken at the same time as the A&P1 lecture and lab combination.

And so this is an extra course that is taken alongside, at the same time, the same semester, as their A&P1 course.

It was originally at least offered during all semesters that A&P1 was offered.

So that means that A&P1 students always have the opportunity to do this alongside.

[15:25] Now we met once a week, and we met for a 100-minute session.

So, that's about what our lab courses do.

That's really two 50-minute blocks. When I first started offering the supplement course, I did just one 50-minute block because.

[15:43] I thought, well, that's going to be more than enough.

What am I going to do during those 50 minutes every week to help the students because they're not going to need that much help, are they?

There aren't that many things that we can do together to improve their study and improve their overall success in A&P One, and you know what, I was way wrong.

And I was spectacularly wrong in the sense that after the first semester of doing it for 50 minutes at a time, my students begged me to make it longer.

Now, they wouldn't have had to do that because when I learned that, that was at the end of course briefing.

And I've had other episodes where I've brought this up, that that's a regular practice of mine that at the end of a course, we'll have a briefing and students get to unload and tell me, what did you like?

What didn't you like? What worked for you? What didn't work for you?

Have any ideas for making this better for the next group of students?

And as one voice, they all kind of clobbered me and said, This is too short, we just barely get started and we have to quit every week and we could have benefited by a longer time and I said, well, okay, but I don't think the curriculum committee, I don't think the administrators, I don't think anybody is going to be happy, with us adding another credit hour here.

[17:07] So going from a one credit course to a two credit course, it's already kind of iffy trying to shoehorn in an extra credit.

There's always a problem when you're dealing with programs like nursing, which was a big program that our A&P course has fed into over the years, and other kinds of health care professions like physical therapy, physical therapy assistant, medical records, or health care administration, different things like that.

They really don't like it when we add more credits because pretty soon it's gonna take six years for a student to get through a two-year degree at our community college.

So there's a lot of resistance there and to get one extra course, even if it is optional, even if it is on top of everything else, that was a big struggle.

So I said, there's no way they're gonna go for a two-credit course.

And they said, that's okay.

[18:07] We don't need a two-credit course. that's just more tuition.

We just want that extra time. And we do that in lab, right? So why don't we do it like we do it in lab?

And I thought, yeah, boy, you got that figured out.

Good solution, let's try it. And sure enough, my college went for it.

So we doubled from a 50-minute weekly session by the request of students to 100-minute session every week.

And even that often was not enough time, But I was kind of, I felt like I was, it hit the ceiling on that one.

Structure of Class Sessions

Kevin Patton: [18:45] So how was the class put together? What did we do in the class that took so long and that really engaged students enough that they really wanted to stick with it?

Generally speaking, in some classes, we just kind of veered off right away into something that the students were really having trouble with. And we just focused on that.

And we just did troubleshooting and, well, triaging, and then troubleshooting when we did that.

But I did have a plan for every week that we were in there, and we mostly stuck to that plan.

And each class, according to that plan, started with beginning with those trouble spots.

So that's how we knew sometimes we had to just set everything aside and just work on some big trouble spot that everybody was having.

But usually there were several trouble spots.

[19:35] So, the way we did that is, As the students walked into the classroom.

They would hand in a card, either just give it to me if I was standing there, or they'd put it on the front desk, they'd hand me a three by five card that had a question on it.

And they were required to turn in a card. Now if their card said, you know what, I'm really doing okay this week, that's fine.

But they had to turn in a card. That was part of their grade.

If they didn't turn in the card, they didn't get a grade for having a card.

Now they didn't get graded on the quality of what was on the card, because what if they weren't having any trouble?

I don't want to penalize them with grade points for that, but they got some grade points for it.

And so it's kind of, you know, we're kind of getting into that alternative grading realm in a way in that we're not necessarily using grades to evaluate the competence of the student.

[20:32] We're using the grade points to really just measure how engaged they were with the process.

And so the students would walk in and, you know, you have a room full of students, you're going to have enough questions.

If everybody broke down a different question, well, we might spend the whole time just on those questions.

And there were a few sessions where we spent most of the time at least on answering those questions, dealing with those questions. And it could be a question like, I don't understand action potentials at all.

Can you go through that again?

And so I would. And by the way, these weren't all the students I had in my own A&P One course.

Many of them were students that had a different instructor for an A&P One course.

And that really worked out well because each of us approached some of these difficult concepts in different ways in our classes.

And so it was fun and enlightening and very useful to the students to compare notes with one another about how things were explained to them.

And by putting that all together, sometimes some little light bulbs went off here and there where little gaps in their understanding got enlightened by seeing a different way of presenting it or a different way of explaining it.

[21:58] So some of them were content questions like that. Some of them were study questions, Like, is it better to highlight my book or highlight my notes or both.

And my usual answer was, don't worry about highlighting. You know, if there's some need you have to highlight, but highlighting in and of itself, even though it's a commonly used study practice, it really doesn't do much for us.

There are much better ways to spend our time and energy.

[22:25] But if you're using it to supplement something else, like underscore the core concepts every time they come up, well, yeah, then okay, do that.

But there's so many different ways to highlight that we can't say that in general it's good or bad to do it this, you know, in the book or in the notes or whatever.

It's like, well, what's your purpose in highlighting? And go from there.

So that's an example of a study skill question that might come up.

There were a lot of those.

And some of them were somewhat personal questions. And this was my, all my classes I teach are pretty laid back and informal.

But this was an even less formal culture in the supplement course than we had in our regular A&P1 course.

And because of that, they could ask some, I don't know if I'd call them personal questions, but person-based questions such as, did you struggle in A&P1 class?

Did you have trouble with action potentials? How did you memorize the bones when you had to memorize them?

[23:31] And so those are, I think, great questions because it really humanizes me as the instructor.

But more importantly, it really tells the students that.

Their instructors aren't born knowing all this A&P. We had to work really hard, too, to get to a minimal level of competence.

And then we worked even more to get to a moderate level of competence.

And if we have any high-level competence at all, it's only through hard work upon hard work upon hard work.

[24:05] And so that's a good lesson for beginning students to learn that, yeah, it's going to seem hard, but hard is how you get there, and you can do it in bits and pieces.

It's a step-wise development. It doesn't just instantly manifest itself in our brain.

It requires work, and it requires time, and it requires steps.

That's how we started each class, was we would address the things on those cards.

As people were gathering and chit-chatting with one another as the class was about to begin, I would be looking through those cards.

[24:40] So I would group them into bunches, because very often there would be like three or four about the action potential, or three or four about how did you manage to memorize all these bones and bone markings.

And so I'd group them together in that, and even if they were only peripherally related, at least by taking them together in the discussion, then it made things flow a little bit more logically, I think, for students. And if it didn't help the students, at least it helped me figure out, you know, a plan for how to progress.

So once we were done with the cards, then what we would do is have a study skill focus.

So I had those planned ahead of time. So I would, you know, say, today I'm going to focus for a few minutes on metacognition. What is it? How is it useful to think about metacognition?

Well, that's kind of meta, isn't it? Thinking about, thinking about, thinking.

But the point is that at the very beginning of this A&P Supplement course, I wanted to really emphasize as students to think about what is helping them and think about what is a waste of time for them, like maybe some of that highlighting that they were doing, or some of these other passive things that really weren't getting the job done at the level that they need to get it done.

[26:01] So, that would be an example of a topic. Or there'd be one week we'd focus on flashcards, and not just flashcards, but some of these higher-level ways of using flashcards, like putting images on them that maybe they've taken with their phones or that they've copied and cut out of their book or their lab manual or from an internet source or something like that.

All kinds of—oh, there's so many different ways to use flashcards, especially in an A&B course. some of those, and that'd be a good opportunity for students to share some of the different things they were doing or they had seen done.

One week we talked about concept maps, and then another week we talked about running concept lists, and then another week we talked about test strategies, including test analysis after the test is over, and how to get better on the next test, how to recognize pitfalls that we're falling into so that we avoid them on our next test.

We talked about how to dissect, some background on how to dissect.

We talked about memorizing. What are some tips for memorizing when we have to do that?

What about scientific terminology? What are some tips for handling and learning scientific terminology?

[27:12] What about reading the textbook? There are strategies for using and reading a textbook effectively, especially an A&P, textbook.

And most instructors don't deal with that in their A&P I course, and most students don't think there's a strategy. They just think, well, it's like any book. You open it up, turn to page one, start reading. If you do that with an A&P book, man, you're going to be snoozing pretty quick. That just isn't the way A&P books are constructed. They're not designed to be used that way. If you use them that way, it's not an effective way to use it. So I'm teaching the class now. I've got to stop that. These are just some examples of some of the things that I would have prepared a presentation on. I'd have a few slides to show them what I'm talking about.

[27:56] More often than not I had actual flashcards to pass around say look here's some flashcards some students gave me Here's another student gave me these and they did this Funny thing and this one did this unique thing and this one did this unique thing and here's some of my flashcards And I do mine even different than any of those and these are some ideas and then we'd sit down and talk about well, what do they like and don't like about these different kinds of flashcards and different uses of flashcards and and maybe start making a few flashcards to see how that would work.

So we would try to turn that into an active process. So we would end up always having some active learning thing to do, whether it had to do with that week's study skill focus or not.

Sometimes we would do, like when we talk about how to do dissections, we would talk about doing paper dissections.

This is where I would give them a big, on an enlarged piece of paper, I would have copied an outline of the human skeleton, for example, but with no labels on it.

And so I would say, look, we can dissect the skeleton. We're not really going to cut it apart, but we're going to look at each part and I want you to label as many parts as you can find on here.

[29:08] And I gave them sheets for the sheep brain dissection, for spinal cord dissection, for a heart dissection, for kidney dissection, for things like that, so that they could go through the lab manual and work through the dissection before they ever came to their lab class.

So they would have already on paper dissected and identified all those parts in photographs.

And then when they got to doing the actual specimen dissection, they were way ahead of the game because don't most of our students just kind of walk in with a blank slate and like, what is that?

You know, that looks like a big piece of cauliflower. I don't know what to do with that.

I don't know, even, you know, it's made of parts. How can I, it's just cauliflower.

What, what, you know, give me a break. What's going on here?

Yeah, okay, I see a stem.

So there's the stem and the floret and nothing else, it's cauliflower.

Well, if they've already done it on paper, they know there are parts and they know how to find the boundaries of those parts or at least, you know, where one leads into another.

So we would do paper dissections, a very active process and I could be walking around the room like you would in a lab and helping students and figure out how to use that technique.

And another thing that we did a lot was to anatomy identifications.

[30:29] With clickers. That is, I would have some of these images on slides, and as a slide came up, then I'd ask them a question, which one of these, A, B, C, D, or E, is the cerebellum?

Which one is the corpus callosum? Which one of these is the pons, the medulla? You know, all these different things, and that's just with the sheep brain. You can do that with tissues. You can do that with any dissection specimen. You can do it with bones and bone markings, you can do it with muscles, you can do it with anything that we learn, especially in a lab practical.

And I'm going to circle back to that technique again in a moment.

Before I do, I just want to give you another example of some of the stuff we do as far as active learning practice, and that is concept mapping. We would draw concept maps a lot.

They knew that in their nursing program, they'd be having to create concept maps for their nursing plans, and they knew that that was difficult conceptually for many of the nursing students, they'd heard complaints.

So they were really engaged in that and didn't realize that you can use concept maps for, everything, everything that you ever need to learn or understand, you can use a concept map for.

Circling back around to that anatomy identification with clickers, I started something, I don't know if it was in the first or second semester that I taught this course, I started doing something at the end of each session.

I would, they had to have clickers for their lecture part of their course anyway.

[31:59] So they had to bring their clickers with them, I used iClickers, with them to the supplement course.

We would just use those clickers every once in a while like you normally do.

That's one of the best practices of using clickers is just use them infrequently.

Use them in every class, but only a few times in each class.

Well, you know me, I break rules when I think they need to be broken.

And that's a rule that I broke a lot in the supplement class.

At the end of the class, what I would do is say, okay, I knew that identifying tissues was going to be difficult for you.

And we went through some hints that I gave you on how to do this, how to think when you're looking at these different tissues in order to categorize them.

[32:51] But now what I'm going to do is I'm going to just put up a picture of a tissue.

Before you've had a chance to even start studying for your lab practical, you're going to need to be able to do this on your lab practicals.

So do you know enough yet having just heard it once?

Because I know by experience, because I've done this myself as a student, I heard it once so I thought I was ready for the practical.

Oh yeah, that's easy. And then you get to the practical and you think, oh my gosh, I know I know that, but I can't pull it out of my brain.

Why can't I pull it out of the brain? And the buzzer's going to go off any second, and I hate the sound of that buzzer, and it's going to, you know.

And so I said, you know, that's gonna happen. So let's get practice, let's try to work on our speed so that we immediately recognize stuff.

And the only way to do that is practice, practice, practice.

That was our mantra, practice, practice, practice.

So I'd show them a slide of a tissue.

[33:47] And then they'd press their clicker button and then I'd show the results.

Oh, by the way, I had a timer.

And the time that the slide was available that the clicker receiver was turned on.

That timer started with longer times and then they became shorter and shorter and shorter as we did more and more practices with that one topic.

So when we were doing tissues, that lasted several weeks. You know, we would prepare for it and get closer and closer to when that lab practical was. So first time through, I gave them a lot of time and they'd press their button and I'd reveal the results and usually they were wrong.

And I'd start asking questions like, well, everybody who picked B, why did you pick B?

And if you pick C, why did you pick C?

And we'd start to go through. And then, yeah, I said this was an informal class.

By this time, students were getting comfortable with me, comfortable with each other.

And just like on family game night, they start jumping up and yelling at each other in a friendly way, but like, no, that can't be right. Yes, it is because of this.

Look at those pink fibers. yeah, but those are not collagen fibers, those are smooth muscle fibers, and they're both pink and they go back and forth, which is exactly what we ought to be doing with our internal conversation when we're learning the tissues and when we're analyzing tissues, right?

We tease that all out, we have those discussions.

[35:14] I don't yell at myself inside my head, usually, but I debate with myself in a cognitive way, way!

[35:23] When I'm trying to analyze a difficult to identify tissue, is it this, is it that?

Well, maybe this, but what about that?

And so they could do that as a group. They could think out loud as a group, and they could think with each other, meaning that the students who didn't know what to think about, they could listen to this and see, well, what are the others thinking about?

What are the questions I'm supposed to be asking?

And they would learn from that, and more and more of them would get engaged, And pretty soon, it was kind of a free-for-all. And I may have mentioned this story before.

I think I have a story about it in my blog from years ago.

One time, my dean came into the room to do my yearly observation, and he was an A&P instructor at one time, too.

And at first, the class started out, you know, pretty even-keeled and so on.

But once we got to this game, which we called the need for speed, hey, it's time for, you guessed it, and they'd all say, need for speed.

And so we did that, and that's when they really started yelling at each other and jumping up and even arguing with me like, no, it can't, that can't be what you're saying it is, and so on.

And the dean afterwards said, oh man, I thought it was going to get out of hand there for a minute. Really?

[36:46] I thought it was great, that's one of my best classes and I had the most fun I've had in a long time and you thought things were getting out of hand?

As far as I was concerned, things were getting really engaged and some really good learning was happening and so on.

So don't let that stop you. I would actually encourage that kind of behavior in class, because it wasn't violent or nasty or mean or anything like that. It was just fun.

And so, that's partly why the students wanted to have extra time.

Because those games that we did at the end, I had to push them out of the room.

[37:28] They didn't want to leave the room. They wanted more and more and more.

You know why? Because then the next week, they had been prepared and they knew what to study.

So the next week they came in thinking, I'm gonna get them all right this time.

And so I'd ask them some more questions. And they wouldn't get them all right, but they do much better.

And of course, I was giving them less time. I reduced the amount of time on the timer.

And so I gave them less time.

And then they, you know, argue about those. Then we go to the next one.

Of course, you know, I was folding in more tissue types and harder examples, more difficult to identify examples.

So we moved in.

And the harder I made it, the more fun they had. They saw it as a challenge.

It was like playing Jeopardy every week in a way in that, no, you don't answer them all right, but boy, aren't you proud of the ones that you do answer right?

And don't you get better and better the more of that that you do?

Yeah, I can guarantee you, because I've watched it happen over many semesters.

So, we did that need for speed game. Another thing that happened every week was that they had a check-in every week.

On the learning management system, in the format of a quiz, I would do somewhat of a survey asking, well, how much time did you spend on this kind of study activity, this, kind of study activity, this kind of study activity?

Tell me what it is that you had a hard time with. Tell me what it is that you found went better than you thought it was going to go.

[38:57] And so every week they had to check in, and again, that was part of their grade, as was showing up for these other things in class, but that was done outside of class.

The weekly check-in was done outside of class on the learning management system.

One of the things that I want to do is remind students every week, here's this list that you're checking off of different things you do.

I wanted to remind them of the kinds of things they can do, because isn't that an issue with students?

And still is sometimes for me, is I'm trying to learn something and I don't always stop and think through, well, what are some ways that I can learn this?

And am I really doing all of the things that I can be doing to learn whatever it is that I need to be learning?

But if you have an online check-in each week that lists many of them, or at least categories of them, then I'd have to check yes or no or yes or no that I'm doing them.

Am I using flashcards? No, not this week.

[39:53] Using concept maps? doing that? How about running concept lists? Oh, I forgot about that. I ought to do that." And so they do that in there. So it reminds them every week of the things that are available for them. And it also reminds them that they really do need to be studying every week, whether you have a test that week or not. You need to be studying. So they did their online check-in each week.

Grading

Kevin Patton: [40:17] Getting back to the grading just as an overall process here, they got points for their online check-in.

They got points for weekly assignments, and that was counted in two ways.

One weekly assignment was to turn that card in.

Yeah, it's an easy thing to do, but you do have to stop and think about it.

And it really does turn on a switch for engagement in the whole process of studying when they do that.

So, you know, they get points for turning in their cards each week that has their pain points on it.

And then they, at the end, they would collect their various active learning things that they did, like making concept maps, starting their running concept lists, doing their

paper dissections, you know, all those different things they had to keep them and collect them into a portfolio.

And that's one of the things we did in the last session. We had our debriefing.

[41:13] Would be part of that last session, but another part of it would be they would exchange portfolios with one another and help each other analyze their portfolio and see what they did. And they got points for that. And I wasn't so interested in, you know, how well they were done. As a matter of fact, I wasn't really very interested in that at all, except out of curiosity and professional interest, but it wasn't a basis for their points.

They got points for doing it, for collecting it, for keeping it there. And of course, just the process of going through it and seeing what other students had done, that was a good way to really solidify and cement their learning at the end of the semester.

[41:56] And they also got some participation points from using the student response system, which, as I said, we kind of overused. If you're a purist by clicker rules, then we use the clicker too much. But you know what? You got points for that.

Not points for using it frequently, just points for having used it every week.

Because if you didn't bring your clicker and you didn't use it, then, boy, you were missing out on a big learning process for us.

So that's the sort of basic technique of what happened.

But a lot of it too was just all of us being mentors for each other and bouncing ideas off one another and sharing what worked for them and what didn't work for them.

So it's a very informal atmosphere.

Does an A&P Supplement Work?

[42:51] A big question is, does an A&P One supplement course work? Well, I think by now you've kind of gotten the hint that there are some things going on there that are very useful. But those things by themselves, I think, makes it worth it.

There are some not-so-obvious benefits as well that I want to mention. One is about their struggles, about their triumphs, about what's coming next, their fears, their anxiety.

[43:16] All these different things they could come and network. And it's a little bit different than, you know, just hanging out outside of class. Those are all very valuable things too, especially if they formed a study group or something. But here it's a little bit

more guided and directed, and they're going to be interacting with students that they probably wouldn't be otherwise interacting with.

So their network gets bigger and more varied than it would be otherwise, and the more diversity we have in our student networks and our student interactions, I think the better the whole process works.

So that's a not-so-obvious benefit of having the A&P1 supplement class.

Another one that, well, maybe it's a kind of obvious benefit, and that is they get more contact with the A&P faculty, right?

[44:05] More contact than being in class and being in lab or stopping by for the occasional office hours.

And let's face it, how many students really hang out in our office that much?

There are some that do, but not all of them.

But if they sign up for this A&P One supplement course, those students are going to get a lot more contact and it's going to be that informal mentoring kind of contact that is really very useful to students.

And we know that there's research out there that shows the more connection that students have with faculty, the more likely it is they're going to stay in the course and that they're going to stay in the program, that they're going to stay in the college and they're going to get a degree.

[44:45] They're going to be successful, and even those I've found, in my view, and I haven't done a study on this, and if any of you know of a study on this, please send it in and let me know.

But I think students that end up dropping out of A&P or not going on in their program, because I do get some A&P students who do pretty good in A&P, maybe even very well in A&P, but by the end of it, they just said, you know what, I don't want to go into healthcare.

I don't like any of this. I like something else now, I'm going to do something different.

The things that they learned in the A&P1 supplement and the fact that they had good contact with an instructor is going to serve them well in whatever path they do end up taking.

So that's a not so obvious benefit. Another not so obvious benefit is that, well, it makes their overall studying more efficient, not only in A&P, but in these other courses.

And we know that once students get out of A&P, they're not done with their academic challenges, are they? Some things are going to get harder and harder for them.

[45:49] And so if we can provide them a good foundation in how to study well for rigorous course, then any rigorous course they get into, they're going to be that much better prepared.

Another not-so-obvious benefit is, by having this weekly session, there are opportunities every week to fix little problems before they get to be big problems.

[46:14] Haven't you had that experience where a student comes in near the end of the semester and, you realize, there is nothing I can do at this point for this student?

You hopefully aren't saying it out loud, but you're thinking.

If they had come to me at the beginning of the course, or halfway through the course, or when they hit this particular thing that they didn't understand, I could have helped them get back on track, and they'd be doing much better now. But it's so late in the game now.

This is a huge problem now. So that little problem became a big problem. And these weekly sessions can help prevent those big problems from developing into such big, huge, unmanageable problems. I did do a survey of student attitudes. I had, I think, 33 students that I surveyed at one point, and 85% of them said that they would recommend the supplement course to incoming MP1 students. 85%, that's a pretty good recommendation, I think. I'll take it.

I'd take a much lower number, so I felt like a lot of the work that I put into this had, really paid off. And then I also found that 97% of the surveyed students found the study tip focus.

[47:40] Either somewhat or very helpful. 30% said it was somewhat helpful and 67% said it was helpful.

For a total of 97 percent, that's almost all, like all but one student, said that they liked doing that study tip focus. Now one thing in the discussions that I had with them, I found out. And I understand this completely. I feel the same way.

[48:05] They were a little bit frustrated with the idea that we only did one every week because that's all we had time for really.

And sometimes, you know, just squeezing that in was problematic.

The thing is, you know, you're halfway through and you're learning new study techniques that sure would have been great if we had known about that the first week.

Why didn't you tell us that the first week?

Well, if you do them all the first week, then it's not really very helpful, is it?

Because it's just too much at one time, it's like drinking out of a fire hose.

You got to do them one at a time, you need to spread it out.

But there is a problem with spreading it out, and that is you don't get to things that you could have used earlier.

And that is a downside, and I never really found a better way to do it.

And if you know of a better way to get that balance just right, I sure would like to hear about it.

But it worked okay, and apparently they were pretty happy with it.

Even so, even though they had that frustration.

Another question asked about whether they found the content-specific help helpful.

That is, you know, when we looked at like muscles in particular and how to study muscles and what's important in identifying the different muscles of the body, or what's important in identifying the bones and bone markings, or distinguishing among the different tissues.

[49:27] Was that content-specific help a benefit to them? You know, something must be wrong with my stats, because whoever gets 100%, 100% found that the content-specific help was either somewhat or very helpful.

27% said somewhat, and 73% said it was very helpful.

[49:50] 94% of the students found that the informal chats and discussions that we had, remember I said how informal this was, and how we would just talk as a group, sometimes breaking it into small groups and talk about what was working for us, what wasn't working for us, what had been my experience as a student, what experiences were they having, what little tricks were they finding helpful, and 94% said that they were helpful.

18% said somewhat helpful and 76% of them said very helpful.

[50:24] What about those online check-ins? Well, I thought everybody would say zero, because they all thought that was busy work.

And like a lot of things like this, where it's meant to get them to do something they wouldn't have done on their own, and it repeats week after week after week, that's going to have some resistance. Whether it does any good or not, the attitude toward it isn't necessarily going to be very good. So I was expecting this to be near zero. Like, no, don't make us do those those check-ins anymore, they are boring.

Well, you know what, 52%, that's enough to win an election. 52% of them found the online check-ins to be helpful.

So I was pleasantly surprised by that.

Even though that number was much lower than some of the other things, I think that the check-ins were doing their job.

[51:12] Now, I did have one profound disappointment that I'll never forget, because it just took me so off guard when I heard this. But I was walking down the hall with one of my students.

I think we had, I don't know, she had left something in my office.

So while everybody was playing a game or doing concept maps or something, we walked down the hall to my office to retrieve whatever this was.

And we were chatting a little bit, and she said, you know, overall this class is okay.

But she said, it's a lot more work than I thought it was gonna be.

And I said, well, what did you expect? And I mean, I didn't say it quite like that.

I said, you know, what were your expectations?

You know, in a very inviting way, because I was truly curious.

And she said, well, I thought I was signing up for study hall.

And I said, well, what do you mean? She said, well, you know, like in high school, you would sign up for a certain block of time, that'd be your study hall, and you'd go in there and you'd sit and study. And yeah, there'd be other students in the room, but you wouldn't necessarily be working with them, you would just study.

[52:14] And that's what I thought I was signing up for. But here, you're having us do stuff every week, We have to do stuff outside of class.

And oh, this is just a lot more than I thought it was gonna be.

You know, I guess when you have your own mindset, you don't realize that other people are coming to this without that mindset.

And they don't necessarily know what they're gonna expect. And you know what?

The supplement course is a weird thing. I mean, you don't see those all over the place.

Maybe this is the first time you're encountering something like this.

So no, you wouldn't know what to expect when you go into that course.

So I had to be a lot more careful about making it clear to students before they signed up for the class, and at the beginning of the class, the beginning of the course.

[52:58] You know, what this was going to be and what we were going to be doing so they could make a better evaluation. That's something they wanted to be a part of. Now, we did have our Institutional Research Office do a study as well, seeing whether our course really was helping the A&P1 students.

And at the top of this episode, I mentioned that mistake I made in the results, and I reported that But our actual result was for the pre-A&P course, the one I talked about in the episode 140, a student can expect a 0.75 GPA increase in their A&P1 grade if they take the pre-A&P class.

P1 supplement course, we did a similar study, it was actually part of the same study, we looked at that, and there the Institutional Research Office found that a student could expect a 0.64 GPA increase in their A&P 1 grade.

So it's not quite as high as the benefit from taking pre-A&P, but it's still a benefit.

And I think it's a significant benefit. It's more than half a letter grade better than they would have done without it.

So I think that that's some good evidence that this idea works.

Parting Wisdom

Kevin Patton: [54:20] Well, there is more to the story. I always have more to the story, don't I?

[54:24] You knew that was going to happen. Well, one of the things I wanted to mention in this, and this kind of has to do with both of these student success courses, the pre-A&P course and the A&P One supplement course, and that is that these are things that we'd like to be doing as part of our regular job of teaching A&P 1, you know, doing this preparation work for students, doing the study skill work for these students, but we don't have the time to do that.

And we're not really getting compensated for doing that extra level of that kind of work with them.

And by putting together these courses, that's a way to get time on our schedule, right?

If we schedule in actual credit bearing courses, then that puts time in on our schedule and only then we get compensated for it.

So now that help with study skills and the review of the core concepts and from their prerequisites, now on the books as paid teaching time.

[55:37] And you know what? The college gets that kind of a benefit too, because the college gets paid for that extra work as well.

That's tuition money. So if we can assume that we're going to have the same enrollment in A&P 1 as we had before we did these courses, then that doesn't change.

But what we've done is we've added a few more course sections, right?

We've added some pre-A&P course sections, and we've added some A&P 1 supplement course sections.

And that's tuition money that goes into the books, right? So our enrollment numbers go up, our tuition dollars go up.

That's a win for the college as well. And I'm not saying this because I'm promoting, you know, padding things to get more money or to get a higher enrollment level and tweak our formula for getting funding from the state or something.

I'm not saying that. I don't think that's an ethical thing to do. I don't think it's a good idea. I don't think it's good for students.

[56:41] But if you're doing this for good reasons, ethical reasons, and you get that benefit, as an unintended consequence, maybe a thought about consequence, but not your primary intent, then that's a win. That's good. That's a reason to support doing this rather than knock it down.

As far as teacher pay goes, my recollection is it's been a few years since I've taught A&P 1 supplement, but my recollection is that our pay formula was the same as for teaching a lab.

[57:13] That is, it was two 50-minute contact hours, just like a lab is. And so at our school, we We get a different pay rate or it counts to our total credit hour workload differently if it's a lab than if it's a lecture course.

So this counted in that formula, in calculating scheduled time and pay rate if we're teaching an overload, it got counted in as if it were a lab.

But there are many ways of doing it, and maybe you have a similar supplement course and you do it differently.

And again, if you do any of this, I sure would love to talk to you about that on an episode sometime. That would be a lot of fun, I think. And I think a lot of people get a benefit from it.

Oh, yeah, one other thing I had, I just glanced at my notes here.

Besides the benefit that this extra enrollment and extra tuition money gets for the college, it may have a similar benefit for the department itself, because the department

may get some kind of budgetary allowance based on enrollment, total enrollment for the department.

And so there might be a little bit of a bump there as well.

[58:27] Now, another aspect of all of this, besides the staffing of this course, is the scheduling and the space.

Now, lab space is the best place to teach this course.

[58:42] Problem is, lab space at most institutions is usually the least available space for teaching.

Often throughout the day, there are at least a few classrooms that are sitting empty.

Maybe a class has been canceled or something in some other department.

[59:00] So yeah, classroom, regular classroom, those are usually widely available.

Lab space, those are usually very tightly scheduled. Even though the lab space is the best place to teach it.

Why? Because if you're talking about bones, you want to have the bones there.

If you're talking about tissues, you want to have tissues available.

You want to have a microscope available if you're helping students figure out how to use a microscope properly and safely.

You know, you can lug some of that stuff to another room, even another building, but all of that is much more hassle.

And really, it does limit how much you really can have in the room when you're trying to use it because you can't lug the entire lab worth of stuff over.

And besides that, what if they're already teaching in all the A&P1 lab spaces and using all of that equipment already or those supplies or whatever?

So there's that issue. And then there's some safety issues too.

Not everything ought to be brought into a regular classroom and used there.

So there's some logistics that need to go on there.

So a lot of times AP1 supplement course was offered at times that a lot of people just didn't really want to be teaching, like late Friday afternoon or something like that.

You know, a lot of times students are okay with that. It's like, phew, my week is done.

Let's go ahead and do the supplement on Friday afternoon, but instructors, not so much.

So you got that to contend with.

[1:00:22] Pre-A&P, that's not an issue in scheduling because that's completely online.

So that's kind of open and ongoing 24-7.

Even though you're not working as an instructor on the course 24-7, it's available to students to work on 24-7.

So you don't have that kind of issue with the pre-A&P course if you teach it the way that I described in episode 140.

Limits may be a problem for either or both of these courses.

So that did get to be a point of discussion a couple of times when I'd have a semester where I had so many sections of pre-A&P and A&P supplement that I couldn't teach as many A&P 1 sections.

And so who are we going to get to do that? How are we going to cover that?

That's a real issue to deal with, something you need to think about.

Another thing that you need to think about came up in episode 140 with Pre-A&P and that is you got to sell your course because people aren't going to automatically know what this services.

Not only that, they're not going to automatically know that it even exists, so they can ask questions about what it is. Because even if it's on the schedule, it's not going to be in a place where they're likely to be looking.

So anything you can do to manage that and influence where it ends up on this, whatever it is the students are looking at, that's going to help you.

So I would get in there and, you know, rattle some cages and do some things and jump up and down and get some other people to help you do that.

[1:01:52] Now to get it all started, to even have a supplement course to deal with this, what I recommend is that you plan it all out first.

Anticipate any questions that either students or fellow faculty or administrators or whomever are going to ask you. Anticipate questions and then have an answer for those questions or those challenges.

Have a way to answer that. And if you don't have an answer, then maybe you better work things out differently.

Maybe that was a fair question or a fair challenge to what you're doing.

So that helps you hone your plan, but it also prepares you for when you're going to present that plan to the stakeholders.

And you want to talk to all stakeholders.

You want to talk to your fellow faculty.

You want to talk to administrators. You want to talk to students and you want to get them all on board with this idea and try to get them to be partners and supporters of your plan and go as high up the ladder as you can.

If you have an opportunity to talk to one of the board members or trustees at your institution.

[1:03:01] Say, hey, I'm thinking about doing something exciting because I don't know about you, but every time I run into one of our trustees, which I don't very often these days, but back in the day when I used to run into them pretty frequently, then they would often say, well, Kevin, how's it going? I'd say, oh, you know what, I'm thinking of this really different idea that I think is really going to help our students. You know what they always said?

And tell me about it.

What kind of idea do you have? What is this mysterious magical thing? So I would tell them.

[1:03:31] And I would be sure to express my enthusiasm and that would kind of get them on board a little bit.

And the more often you can do that, the more aware they become of it, the more enthusiasm they can pick up from you, the more likely it is you're going to have support all the way up that ladder. And it's not just trustees. I mean, they're like so far up the ladder, they're not going to really have that much influence on what goes on in terms of adopting that course and putting it into the schedule.

But it can't hurt, I'll tell you that. And one thing that really helped me a lot was that I often was in one of our lunch areas, one of our cafeteria areas, at the same time as our academic vice president.

I knew him from when he first started teaching at our college, and we had some other things in common.

We knew each other, we had a number of conversations, so I'd often stop by and either sit with him and have lunch, or if I couldn't do that, then I would say hi, and I would every once in a while drop by and say, hey, I'm still working on that plan.

And you know what? He thought it was really good, because you know administrators, they like to be innovative too.

[1:04:39] Most of them do. You and I both know some administrators who don't, but a lot of them do.

They want to do better by students as well.

They want to see successes in their departments. They want to take some of the credit for those successes, and you know what, I'm willing to give them the credit if they're going to help me get it on the books.

And that guy, he really helped me get it on the books. He really was a big supporter all along because he was one of the people I bounced ideas off of in planning.

That really works good to have the person who's going to make the final decision help, you work out the plan and tell you what things you need to avoid and things you need to put in there and people you need to talk to and people you need to get on board.

So, find those people you need to get on board and get them on board.

[1:05:27] Curriculum committee members, it's a good idea to chat them up, even if they're from another discipline.

Maybe especially if they're from another discipline.

They want to know what's going on in your department. They're on the curriculum committee.

They want to have a better feel for it, and you can do that.

And you can spread that enthusiasm even further.

Speaking of the procedures, you need to follow the procedures carefully.

You don't want to make a misstep because it can be thrown out on the technicality.

And we don't want that. Another thing is you want to anticipate roadblocks.

[1:06:01] Like I don't know, the English department never approves anything the science department wants to do.

Now, that didn't happen at our school. I just made that up.

But you do have politics go on. You have personality conflicts.

You have discrimination within disciplines. I mean, discipline discrimination, I guess you can call it.

You do have things like that, especially on committees. So you want to anticipate those and be prepared for them.

Maybe smooth them out before they can ever rear their heads.

And you know, if it is the English department, you anticipate being a block, well go talk to people in the English department and get them on board. And now you have them on your side.

[1:06:44] And in all of this, at all of these levels, doing all of these things, negotiate, negotiate, negotiate.

In other words, if somebody says, no, I don't like that idea.

Walk away and say, well, is there some part of it you like?

What is it you don't like? What would be a good way to change that?

What would be a good way to make that better?

So do that kind of negotiation early in the game so that it's all worked out.

And something that I found very useful is based on the Harvard Negotiation Project approach.

And to oversimplify that, it's basically starting with the problem to be solved, which I think in the Harvard Negotiation Project they call the concern, and then solve that concern.

In other words, you don't wanna start with positions and people are defending their positions because if you start with positions and you try to defend them.

[1:07:38] Oh, you're never gonna get anywhere, because the goal is to not give up anything.

But if you start with a problem to be solved, it's not a matter of giving anything up.

We both want to solve this same problem, this same concern we both have.

And so, what's your idea for solving it? Eh, that's okay in part, but what about this idea?

And you're like, eh, it's okay in part. So you take the parts that overlap, and you negotiate, negotiate, negotiate, until you get to a point where the concern is addressed.

Now it could be that the concern gets addressed by something other than your A&P1 supplement course.

So you gotta be open to that. And you know what, if there is a better way to address the problems that I mentioned, such as ill-preparedness of the students, you know, in their core concepts, as lower learning skills than they really need to have to be successful in A&P, If those concerns are addressed in a better way than your courses, by all means, go in that direction.

Don't do these courses.

But for me, at the time and place when I put them together, and I think they continue to be really good solutions to that concern.

[1:08:52] Now, after it's in the catalog and on the schedule, and I mentioned this in episode 140, just briefly review, you need to put out brochures all the time.

Have them sitting around in the advising areas. Have them available for students, especially if they're prerequisite courses that your college is offering.

Make sure that there's materials in those classrooms where those courses are being taught that is advertising and promoting your pre-A&P and supplement courses.

We do a lot of emails.

We get the names of the students that have signed up for A&P1.

And a couple of times before A&P1, we send them an email saying, hey, you're invited to take either or both of these supplemental courses and here's how they're going to help you.

And every time we send out an email, blitz, we get some more people signing up.

They really do work well.

And of course, we make sure that that invitation letter is brief and to the point and informal in tone.

And they work. Put up posters, hire a blimp. No, no, no, that's not going to work.

[1:10:03] That would be not cost effective to do that, but boy, that'd be fun.

And we're gonna have a blimp overhead, that's okay.

Anyway, you can ask the faculty in the prerequisite courses.

[1:10:15] I've done that a lot, and they're usually more than happy to help out a peer to mention it in their courses.

You might, if you have time, ask, hey, can I have just one minute while you're getting your stuff together that I can address your class and tell them about this?

Because sometimes just that personal connection of you being in the room is enough to push them over the edge they've already seen the posters and the brochure and so on. And use all of that stuff. Don't expect students to just come to you without doing any kind of marketing. It just ain't going to happen, because this is a weird thing. It's not like A&P where, you know, hey, this is required. I got to do this. I don't need a brochure to tell me to do it. These are things that are optional, and so you need to do that marketing. And I mentioned this in episode 142, and that is give regular presentations

to the academic advisors and stay in touch with those academic advisors because they can do a lot to guide students into your course.

Oh, this is so important.

If you want this to continue, if you want this to keep going and helping students, don't ever walk away from any aspects of this course because you are the champion of this course and you need to be the ongoing champion of this course.

[1:11:34] Because you're going to have some ownership of it. If you can get some more people to consider themselves owners of the course, wow, that's great. That is super duper. And I commend you for doing that, because one or more champions are the ones that are going to keep it on the books, the ones that are going to make sure those emailings go out, that those posters go up, that the course continues to get tweaked and get better and better, and that the word gets out to students and as soon as you stop doing that, that might be the end of your course.

That might be the end of that course because there's nobody else there to pick it up and take it on for you.

So if you're thinking about not teaching that course anymore, try to find somebody to take your place that's going to be as strong an advocate for it as you are and love it as much as you do.

I think once they start teaching it, they're really going to love it anyway, but you got to start working on them before they even agree to teach it, right?

I think that these courses together, but each one separately, really does improve student success.

These courses help all students, the students who struggle and the students who otherwise would do pretty good, maybe even very good anyway. Both groups, and everybody in between, are going to benefit by these courses.

Do they fix every student and every challenge that might be experienced by a student?

[1:12:58] Yeah, I don't think so. I can't really think of something they're not going to help, but there probably are some things that they can't fix. And there's some people that they're not going to help.

You know, in general, they're going to do a really good job of it.

And we have the data to show that it does.

I just want to emphasize that this is another way to introduce a personalized approach to education into your A&P curriculum.

Because these courses have some level of self-pacing, pre-A&P more than the A&P One supplement, but there's some self-pacing built in there anyway. And there's certainly a

lot of, in both courses, a lot of focusing on where the focus needs to be, and not so much focus on areas where those students are already proficient.

[1:13:48] So it's very personalized, and we know that that's an important consideration in education, especially these days.

And lastly, I want to emphasize that both courses really do help build confidence in students.

And you may remember the quote that I read to you at the very beginning, the cold opening, of episode 140. It was from Arthur Ashe, the tennis champion and activist. And he said, one important key to success is self-confidence. An important key to self-confidence is preparation. And you know what? These two courses, they give students the preparation they need to be more confident and therefore more successful in their A&P One course.

Staying Connected

Kevin Patton: [1:14:49] In this episode, I briefly discussed a supplemental course that I developed to help students not only make it through their A&P course, but to do so with great success.

[1:14:55] Not only that, but it also helps students be prepared for later courses in whatever healthcare or related program they attempt.

If you want to adopt or adapt any of the ideas at your own institution, you may want to share this episode with your colleagues and supervisors, and maybe even your students.

And don't forget, I always include links in the episode notes.

If you don't see them in the audio player you're using right now, well, then go to theAPprofessor.org/141.

And while you're there, you can claim your digital credential in professional development for listening to this episode.

[1:15:41] We want to hear your reactions and other ideas you have or similar experiments and teaching that you've tried.

Just go to the podcast hotline at 1-833-LION-DEN, that's 1-833-546-6336, or send a recording or written message to podcast@theAPprofessor.org.

And if you want to come on the podcast and talk about your teaching tips, or your failed or successful experiments in teaching A&P, or maybe, I don't know, a paper or a book

you just published, or maybe you have some myth or misconception you'd like to get straightened out for all of us, or maybe you have a new discovery that we ought to be adding to our course content, and maybe you just want to talk shop. Well, then call or write and we'll set something up. I'll see you down the road.

Aileen Park: The A&P Professor is hosted by Dr. Kevin Patton, an award-winning professor and textbook author in human anatomy.

[1:17:01] Music.

Please remain seated until this episode has come to a complete stop.