Podcast 488: Helping Students Avoid Plagiarism, Part 2

Episode Transcript

Andrew Pudewa: The problem is when you abdicate your authority over what you've written to a Grammarly-type and saying, well, it knows better than I do. It's going to probably reduce very significantly some of the more creative elements of your writing.

Julie Walker: Hello, and welcome to the Arts of Language Podcast with Andrew Pudewa, founder of the Institute for Excellence in Writing or as many like to say, "IEW." My name is Julie Walker, and I'm honored to serve Andrew and IEW as the chief marketing officer. Our goal is to equip teachers and teaching parents with methods and materials, which will aid them in training their students to become confident and competent communicators and thinkers.

Julie Walker: Ok, Andrew, part 2 of being prepared for university writing and helping students avoid plagiarism, and we are here at the NCFCA Nationals. I always tell people you've been homeschooling for a while if you can say HSLDA really quickly and NCFCA really quickly.

Andrew Pudewa: N-C-F-C-A stands for National Christian Forensics and Communication Association.

Julie Walker: Amazing.

Andrew Pudewa: I've been practicing

Julie Walker: You have been practicing and so we are here, speaking to

Andrew Pudewa: At the national tournament with parents of kids who are competing here at this phenomenal event.

Julie Walker: Yes. These kids that are here competing are, have qualified for nationals

and are the best of the best. Yep.

Andrew Pudewa: Cream of the crop. Top notch. And the parents of the kids who get here, they're the best parents in the world too.

Julie Walker: Yes. There you go. So we are here specifically at their invitation, speaking about helping students avoid plagiarism. We left last week as a cliffhanger talking about the Hilarious Bookbinder, who is a philosophy professor. And his way of helping students avoid plagiarism is requiring them to take Blue Book exams in his class. Do you remember blue book exams? How many of you here are old enough to remember a blue book exam for you? Young punk kids over there? Oh, you guys have done them okay though.

Andrew Pudewa: You remember where you are.

Julie Walker: You remember where you are, right? You take your little pen and snap open the book and open it up and off you go.

And that's how you do it. I actually gave a talk at a homeschool conference a couple weeks ago, and I was talking about the problem of AI and plagiarism. And I mentioned this idea of Blue Book and I said, if you're not teaching your students handwriting, if you're not teaching your students correct spelling, and are relying on Grammarly or spell check to do this for you, you are doing your students a disservice. Because if they're in a university class and their professor is concerned about this idea of AI and plagiarism, they're going to be doing blue book exams and yeah, what a pain for the professor to have to grade that.

Andrew Pudewa: There are more and more people in higher education that are returning to in-class writing assessments. It's, I think in a way going to be super hard for kids who started doing everything on a Chromebook in third grade, and the paperless classrooms of middle schools and high schools. Those kids are going to be woefully unprepared if they hit those university-level teachers who are expecting skills that they just never developed. So this is another reason why most homeschool kids do extremely well when they hit a university environment there. So that is going to be a trend.

Julie Walker: Yep. So how are we at IEW helping students avoid the problem of plagiarism?

Andrew Pudewa: I think most of us remember being in fourth or fifth grade and writing reports, and I remember very well how to write reports. You get your subject, Japan or whatever, and you open the encyclopedia and then you read till you find a pretty good sentence. Then you copy that sentence, but you change a couple words if you can think of a way to do it. Then you read until you find another pretty good sentence, copy the sentence and change a couple words, and you read, copy, change, read, copy, change, read, copy, change until you get enough. And then you turn it in and you get an A. And you're very happy in fifth grade.

And I think that was the entire method that I used in fourth, fifth, sixth. Some of you are nodding. I think this is a common experience. I honestly don't remember doing much writing at all in high school. I'm sure I did something, but I have no memory of doing it or learning anything about it. Then at some point, somebody tells you, you can't do that, and you think, well, that's the only thing I know how to do, and you struggle through some college classes.

So when we start with younger children, essentially we reverse the process. So rather than copying a whole sentence, change a few words–no, you copy a few words into a keyword outline and then you can change whole sentences. And we do that with our stylistic techniques, dress up openers, decorations, and things like that.

So from the very beginning, the kids are getting this better approach to moving ideas from one place to another. And that really best happens on paper. The temptation to–and I've

succumbed to this temptation–is to copy by highlighting a chunk of text and then paste into a document and then say, well, how do I tweak this thing around? And it's a horrifying temptation. And so I have actually tried to avoid the circumstances where I might do that because it's much harder to avoid that problem of literal plagiarism.

Then of course we already talked about, well, there's that challenge of figuring out where did this idea actually come from? Was it general knowledge? Did it belong to somebody? Did it belong to somebody who stole it from somebody else? Who do you cite and how do you keep yourself, how do you keep your nose clean and doing all that? But now of course, the problems, I think, are much worse. Because now, rather than doing research by having three or four or five different sources, reading them, finding relevant ideas, collecting them up, putting them to an order and writing a paper, you just tell AI what you want and what kind of sources you want it to find, and the better the directions you give it, the better product you get.

And then you can read it and decide what to do with that. And this is where I think we see probably the biggest reason to teach kids to write well before they get into using AI in any way because, well, we mentioned earlier that problem of it giving you ideas and then you putting your name on the paper and thinking that you thought of them. So you're outsourcing the thinking, but more importantly is your ability to read the text and know if it has that human touch. So, AI can generate video, AI can generate art, AI can generate music. AI can generate literary text. How do you know if it's AI or not? Well, I've talked to quite a number of people. I was talking to a good friend of mine, relative actually, who is an artist, and she said, “Oh, I can tell AI art instantly.” Why? Because she's an artist and she intimately knows art. I would not be able to tell necessarily a difference because I don't make art. I don't live in art. Same thing. If you're a musician, you can detect artificially generated music.

If you're not a musician, you can't tell the difference. Same thing with the writing. If you write pretty well, you can detect that AI-ness of it almost in a way that it's too clinical, too clean, too perfect. Then you can know I need to work this thing into something that's more real, more human. But if you don't write well, you won't really know what to do except just read it and say, yep, sounds pretty good, and turn it all in. Then of course, the professors have to run it through an AI that is trained to recognize AI-generated text.

Julie Walker: And we know that those are not always accurate. We have had students in our online classes where their paper was suspect of being generated by AI.

Andrew Pudewa: Well, because it was too perfect.

Julie Walker: It was too, perfect.

Andrew Pudewa: And I don't know that that's because it was run through an AI detector or if it's just that the teacher thought that's just too good for a kid to create. Right. But it was interesting because Hilarius Bookbinder is a professor, philosophy professor. He said one of

the clear indicators of AI generated papers is grammatically perfect, like every word spelled perfectly, every apostrophe, no homonym confusion, everything too perfect.

That's the first thing you would look at and say, well, a human being didn't do this. because 99.999% of the kids can't produce a grammatically perfect paper anymore. So then the advice is really weird. If you are writing a paper and it's perfect, throw in a couple little punctuation errors just to communicate to the professor that a human being actually had a hand in doing this. Although the funniest mistake is I've seen communications from students to professors with the AI prompt included in the paper: like you didn't even read this thing before you printed it out and turned it in.

So kind of weird, but it's just this game of cat and mouse and it's been going on forever. Professors make rules. Students try to get the easiest way around the rules. Then the professors have to make more rules and then they try to figure out how to get around those. And the real problem is for so many kids in schools, being in school, the primary goal is not learning and growing. The primary goal is make teachers happy, get good grades, and look good to other people.

So I think that's where most professors are mostly frustrated right now, is they're getting kids out of schools and their whole idea is you play this game. What they really want to do is let's engage in meaningful and deep thought about something that I know enough about to guide you through.

So I don't know whether you should actually throw in a few little punctuation errors into your paper to kind of prove, oh, this had a human hand in it. But I do know that kids who have the skills to write well will be able to use the AI as a research tool and avoid the problem of depending on AI for doing all their thinking for them. So that's one response. I can't even remember your question, honestly.

Julie Walker: The original question was: How does IEW help students avoid plagiarism?

Andrew Pudewa: Well, it just depends on how you use IEW. I mean, you could very easily use an IEW assignment and a kid could take the thing and write a pretty clever prompt, like give me a three paragraph summary of this story. Be sure you have all these grammatical constructions in each of these paragraphs. Be sure that you give it a nice title that reflects the last sentences.

I mean, you could essentially recreate the assignment and the checklist, feed it into an AI and probably get a pretty decent thing out of it. So again, that's why I think so many people who really want to teach writing and that number, I believe is decreasing, are going to return to the thing like handwritten and in-class. And because policing, it just becomes a…Teachers don't want to be policemen. If they wanted to be policemen, they would've signed up to be a policeman and make a lot more money. They signed up to be a teacher so that they could help students grow intellectually, spiritually, academically. And so I think we're just, we're seeing a

greater disparity between people who care, now they care a lot more, and people who don't care and they're just giving up. A lot of teachers are just giving up.

I even know teachers who would, high school teachers who would have their kids write on paper if the district would give them paper to write on, but they don't because they want paperless classrooms. So we don't even give you books. It's all PDFs online. We don't give you things to do with your pencils or pens. You have to type it. There's even a charter school we work with in a state. I won't mention the state because I don't want to disparage any states, but the state requires fourth graders to do the writing assessment online on a keyboard. So they have to spend a bunch of time teaching little nine-year-olds how to type. And if you're doing all your time on that, how are you going to teach them to write well on paper? And there's huge amount of research, in the show notes.

Julie Walker: Paper and Pen — What the Research Says

Andrew Pudewa: I did a whole talk on all that research. About how you get better reading, better writing, better everything, better brain growth, better engagement levels when you're using paper for reading and writing.

So at least primary through middle school. And I think if you set the foundation, then most of the kids are going to go into high school and, and then onto college with that foundational skills and not be tempted into the gut pace, cut pace. Most teachers are now saying, I'm going to teach you how to use AI better, and that's the lesson.

Julie Walker: And I just made a little note here. Is there a place for AI in academics?

Andrew Pudewa: I don't know. Every time I ask for information, I get wrong information. I'll give you a perfect example. I asked chat GPT for a list of Catholic poets in the last 200 years, and on the list it gave me what was Henry Wadsworth Longfellow. I said to myself, I'm about 99.99% sure that he was not Catholic, right?

And so I said, is Henry Wadsworth Longfellow Catholic? And then it came back and said, no, like, well, why didn't you think that before? So where did he even get that information? Right. I've had many errors. And the good news for me is I have enough life experience and general knowledge to note things that could be an error. But kids don't have, they don't have life experience in general knowledge. And they're just going to accept that as if it were absolutely true. And I think that's the biggest danger right now.

Julie Walker: So much fake news.

Andrew Pudewa: And you can also, you can ask, depending on what models you're using, you can ask the AI to cite its resources. But then as I mentioned in the last episode, people have discovered that AI will simply make up citations to make you happy. Its whole goal is to make you happy supposedly. It doesn't make me happy, but…

Julie Walker: So I think of all the tools, and I know you've, we've talked about this before on our podcast and you've written about this, I think about all the tools that we use today to make our lives better. GPS. That's the most obvious one because I'm directionally challenged. I cannot get from my hotel, which is a mile away, two miles away here without getting lost, without my GPS.

Andrew Pudewa: If you just got a dumb phone and no GPS, you'd regain your mapping ability.

Julie Walker: And I'm thinking of calculators and other things. Can't calculate a tip at a restaurant because that's skill is atrophied. What this of course is the other problem with AI and artificial intelligence and chatGPT is this thinking that it's atrophying,

Andrew Pudewa: Well, we could look at it in the process of research, right? So if you're doing research, and we do it in a very simple way, Unit 6, multiple reference summary. And here you've got three sources and you read one and take some of those facts, put them into keywords, read the next one, take some of those facts, put them in the next one, you get three or more outlines.

Then you decide of those facts that I chose, what's the best of those? And you're, it's this filtering system. Like what's the best of the best? And then you come up with a little report from multiple sources, so you can teach that to kids as young as 10 or 11 years old. You could contrive the materials to work, and you can continue to teach that into high school.

I've talked to college teachers who are teaching basically our simple little unit six model to their college freshmen and sophomores who never got it in schools.

Now, that whole process is what the AI large language models will do. In fact, they'll go more than three sources. They'll go the whole internet and then they'll give you this synthesized thing.So then you didn't have to do any comparison, any discerning of what's the best, you don't have to make the decision of, are these related enough to put it in–the all the thinking skills that are in that process that it's doing for you, you won't do, and if you don't do them, you never learn them.

Julie Walker: And you're being robbed of the joy, I think of that term that you use, the spark of joy that you, that you get when you do that research. And I think about this because the Unit sixes,

Andrew Pudewa: You wrote some of them and had the spark of joy.

Julie Walker: I have written some of these unit sixes and actually Andrew taught me how to write unit six source text. And basically you're doing a unit six on steroids because you're taking all of these facts and trying to choose which one is the best. But do you know what I used for the most part in

Andrew Pudewa: Chat, GPTI use,

Julie Walker: I did not. Are you ready Books? I didn't even use the internet because the internet is hard to discern whether or not…

Andrew Pudewa: It's pre-digested. I think that's probably one of the best words is, is you've got pre-digested information, so when you absorb it, it's like drinking. What's that thing they give to old people? Ensure it is like, here's all the vitamins, but none of the actual goodness of the food. Yes. And that's what we're kind of seeing, I think. Yeah. And that was happening with the internet in general. Yeah. But now that's what large language, and it's predigested, it's stripping the intellectual nutrients out of the whole thing. And I think it's just tragic. And even if the accuracy gets higher, and it doesn't give you wrong information, like telling you that Longfellow was a Catholic poet, it's still impoverished. It's an impoverishing process.

And of course there's also the problem of hallucination. There's the problem of large language models feeding themselves on other large language models. And pretty soon, in fact, I heard a really interesting thing. I was kind of thought that would be cool. AI could destroy the whole internet. How? Because no one would ever believe anything that they ever see.

Julie Walker: Okay.

Andrew Pudewa: Which is almost where we are at the moment, right?

Julie Walker: Okay. I want you to define what you mean by hallucination. Do you guys know what he's talking about? The first time I heard this, I thought this person was actually talking about hallucinogenic drugs because they were talking about it in the terms of pharmaceuticals. That's–the student was studying was actually Heidi Thomas' son who is now a doctor of pharmacy? No, he is studying pharmaceuticals. And is now a doctor of pharmaceuticals, but they, they were talking about hallucination and I'm thinking

Andrew Pudewa: This would be great. I can see a bumper sticker “Hallucinate for real. AI does it.” I wanted to get into the bumper

Julie Walker: Yes, I, yes. Okay. So what is hallucinating?

Andrew Pudewa: So what is it doing? Large language models. It's saying here's a string of words. What is the most likely next word that would come in this sequence given the massive billions of numbers of words that it has in its database?

Julie Walker: like predictive

Andrew Pudewa: was going to say brain, but that would be so horrible. In, its in its database, so it's predicting, right? And so that's kind of what we do is we know words, and we know patterns of language, and we're going to say something. And if we don't say a word that makes sense then we wouldn't make sense. So we limit ourself to the number of words that would make sense.

So the hallucination happens when you get something that makes sense but isn't true or real, but it makes sense, and then that builds on that and builds on that and builds on that. And so I don't know this thing about Longfellow being a Catholic author. How'd that get in there? Well, maybe it was scanning and looking and it had a list of authors from a time or place and it said, well, most of those are Catholic. So all of them are Catholic. And it made assumptions. I don't know

Julie Walker: It was hallucinating.

Andrew Pudewa: not quite sure exactly what AI hallucination is, and I'm not quite sure I want to know. But it essentially is when when you believe something that isn't real. And so AI is giving you information as if it were real, and it doesn't know it isn't. So it's hallucinating.

Julie Walker: There you go. AI doesn't know that it's hallucinating. It doesn't know that it's real.

Andrew Pudewa: Unless you ask it, are you hallucinating?

Julie Walker: I suppose a good answer. So I want to just kind of wrap up and then take some questions, if that's okay?

I want to talk about just specifically being prepared for university writing and as the Institute for Excellence in Writing we have some thoughts on that. More than that, we have a course devoted to that. This is a 12-week course that we developed a couple years ago, and I'm just going to read

Andrew Pudewa: With the help of some university professors saying, here's what I would like my students to come to me, being able to do.

Julie Walker: Being able to do, and actually university students who said this is the assignments that we received in college. Yeah. And so these are actual university assignments that we're teaching students how to do. One of the very first things that we teach students how to do is take notes.

Andrew Pudewa: Right, and we have that advanced note taking system that I learned, gosh, back when I was a freshman, right, in 1979, and I learned it from Evelyn Wood Reading Dynamics.

Julie Walker: There you go. That's right.

Andrew Pudewa: I took that, it was extra $500 I paid and it was the only valuable thing I got out of a whole year at San Francisco State University was that note taking system, and I use it to this day.

Julie Walker: Well, and Andrew teaches that while live lectures are happening. Yeah. And actually one of the professors of lecturing is me.

Andrew Pudewa: You talked about professional dress.

Julie Walker: It was basically a little bit of what I shared earlier today is sit in the tea. Just some strategies for success in school and being prepared

Andrew Pudewa: Who taught on how to dress well?

Julie Walker: That was Rachel.

Andrew Pudewa: Oh, okay. Because I remember we did that. Anyway, someone give a lecture and then I do the notes on the whiteboard. The kids copy and then they try to not look at me and do it and compare, and then they try to do it on their own. It's really worth, it's probably the most valuable thing.

Julie Walker: Well, I don't know about that, but what I liked about that was, oh, you guys, you're the best. They just moved to the front row.

Andrew Pudewa: They got the hint.

Julie Walker: Amazing.

Andrew Pudewa: Third times a charm.

Julie Walker: Just for you, I'm going to tell you what's in this course, so note taking, and then we talk about. A précis. And a précis is essentially a summary. And if you know our models, that's a Unit 4, so how to take something long and take some of it and put it into a basic précis. And then we're also teaching the TRIAC model

Topic,

Andrew Pudewa: restriction, illustration, analysis,

Julie Walker: and clincher. Yep. paragraph model. which is super helpful. And then we get into actually analyzing a speech by Eleanor Roosevelt.

They have to write a two paragraph précis on that, and then we get into a personal essay, something called a life cycle paper, which is take a product and take us through its lifecycle and kind of like a business paper, like what would you write in a business class?

So, a lifecycle of a product, , what do you predict it's going to happen at the end of the day, or what has it already? What has happened to slide rules? What's a slide rule? Well, that now you know slide rules are no longer available. They were replaced by calculators. Lifecycle. tragic loss.

Well, that's true.

But anyway, and an annotated bibliography.

Andrew Pudewa: Very important.

Julie Walker: It is a great exercise. A 1000 word position paper, and we talk about how to convert words into paragraphs so that you know what your assignments are. A reflection essay. What's a reflection essay? And then write a fable in the style of G.K. Chesteron.

Andrew Pudewa: Oh yes, we had author, imitation author to develop stylistic technique. Yeah,

Julie Walker: Basically a 12-week course helping students be prepared for collegiate success. That's what

Andrew Pudewa: I forgot how good that is.

Julie Walker: It's such a great course, Andrew. You should take it. You should watch it.

someday. Maybe you'll learn something. Well that's, that's our talk.

Does anybody have any questions for Andrew? Okay, we're going to need some mics here. Thank you.

Questioner: What is the purpose of writing and how does AI strip that purpose away?

Andrew Pudewa: Francis Bacon said, “Reading maketh the full man, discourse or speaking maketh the ready man, and writing maketh an exact man.” I could also quote Jordan Peterson who said that writing is the distillation of thought. So you have a lot of thoughts swirling around in your brain all the time, and probably more than you can use for any given purpose.

And in conversation we kind of filter and sort, And, “well, should I say this or not?” And we make a decision, we say it, and then we hear something in response. So that's kind of a first step, but when we actually say, okay, of all that I had and all that I've talked about, what is of most value, what is most relevant, what is the best way to articulate this idea? That takes a mental act that you don't encounter in any other activity than writing. So there really is no substitute for writing. And if you start to outsource that, “here's my outline, write the paper for me, oh, magical computer,” You're depriving yourself of that precision of thought that is going to carry over into everything you do, all the decision making, all of the analysis that you have to do when you live your life.

So writing is, we think of it as an academic thing, but it's really the representation of improved thinking skills.

Questioner: What if a person were to cite AI is their source?

Andrew Pudewa: What would you do if a person is to cite AI as a source? Well, I don't know–I would commend them for being honest. I would say thank you for being honest. I think for the most part, if you're going to have that type of thing happen, you can ask AI to give you the sources from wence it got its wrong information or it's right information, and then you could go to that source, double check it, and so it could be a research tool, but to just put quotations around something and say, chatGPT-4.0.

I don't know if that would fly.

Julie Walker: What would the compliance committee do with that?

Andrew Pudewa: Here at the debate tournament. Yeah, probably not. I would say just don't do it, but yeah. Okay, good. We got another question there.

Questioner: First of all, if you have an eight week course option, because that's all I've got before college.

Andrew Pudewa: Well, I think you could do the first few in less than one week if you just speed them up.

Questioner: Oh, okay. So my question was, I want to become a journalist. I never really used artificial intelligence, and I didn't really start typing out my essays until eighth or ninth grade because I've done CC for a while and have done IEW all that stuff. Would you say that I should write my essays and then type them up for college? Because I've just been typing my essays up. So would you recommend me going to a written method and then typing them up?

Andrew Pudewa: Okay. Yeah. Her question is, she's used to handwriting on paper, but now she's headed to college. She wants to do journalism, and she's typing the papers. Which is 99.9% of everybody is doing that. I think your question is, should I handwrite them and then type them? That would only be if you have a super abundance of time.

Although it's very interesting to note that if you look at fMRI brain scans of people while they're doing various activities. Writing on paper requires a lot more brain activity than typing, and a lot of that is seen in the subdominant hemisphere. You have your dominant hemisphere, which in right-handed people's left brain–executive language function.

So you see more activity in the subdominant, which would be the artistic intuitive side. So I think there's some evidence to support the idea that writing on paper would allow you to access artistic intuitive thinking a little bit more. It's also interesting to note that both Tolkien and C.S. Lewis wrote everything they wrote on paper even though they did have typewriters at that time. Lewis wrote everything not only on paper, but with a fountain pen, not just a fountain pen, a dip-in-the-inkwell fountain pen. Now that's partly because that's what it was when he grew up. But you think there's a certain artistry to writing and does that carry over into the quality of language and thought and imagination?

I would say try it both ways. Right? Do a little experiment.

Questioner: I, I write my outlines out and just kind of get my flow of thought out on paper. And sometimes if I have a way I want to craft a sentence, I'll write it out. And sometimes I'll put like, put this source in, but when I type it, usually I'm looking at what I've written. And then take it from the paper kind of general idea.

Andrew Pudewa: That's probably the best of both worlds. Handwrite your outlines, put little notes. You've got a quote you want to use. Put a little note for that, and then go type it up from that. That's probably the best of both worlds there. You're going to save time, but you're also going to be thinking and and doing.

One other problem with typing. It's really easy to type something, decide you don't like it, and just delete it and do that a few times. You've been sitting there 10 minutes, you still have a blank screen. At least if you're writing on paper, you can cross it out, cross it out, cross it out. At least you show you did something.

So, it's a better feeling in a way, ? Well, good luck in that journalism career. I hope that's not one of the job categories that gets completely eliminated by ai.

Questioner: I was Grammarly and I was orientation, and they told me about all the different sources of artificial intelligence that you shouldn't use, and Grammarly was among it. I'm not very tech smart, so I wondered about this. There's ai, like a level of ai, Grammarly, but what I use Grammarly for is just spell checking what I've already looked at it myself. Do you recommend just do everything I can and then just…

Andrew Pudewa: Yeah. Again, it's one of those things if you know a lot, if you are good at grammar and you have a really good sense of developed language, then you can run something through Grammarly and you can reject changes that it might suggest because you want to say it the way you said it and you know that that's good and acceptable. It's just not in its standard usage database, so that's a good use of Grammarly. The problem is when you abdicate your authority over what you've written to a Grammarly-type AI type and saying, well, it knows better than I do, and then it's going to probably reduce very significantly some of the more creative elements of your writing.

If you take a really good piece of prose, say written fifty or a hundred years ago, it will find all sorts of problems with that beautiful thing that is clearly way above the average level of language usage. So don't sacrifice your creativity and your voice on the altar of Grammarly's idea of what's correct, but spellcheck–yeah, I mean, we all need that one more. Anybody got one more?

Questioner: Has your approach to writing changed at all with the evolution of technology?

Andrew Pudewa: I don't think our approach to teaching it has changed all that much. I think that the few things that I write, I write as the result of long conversations that I've had over many long periods of time, so that all those ideas kind of swirled around. And so if I had to churn out more stuff. I think I probably would've used it differently.

In terms of teaching it, we are really teaching it the same way that Webster was teaching it the way he learned it. We're talking a hundred years ago. So there is a rich, solid tradition that pre-exists modern progressive education and is proven to be far superior, and I don't think we would change that very much. The only thing I would say is we've actually incorporated

some technological tools and made them available for teachers so they can more quickly help the students figure out whether did they get all the dress ups, get all the openers, get the topic clincher, or get all the checklists organized. And that's a fairly mechanical thing, and it seems appropriate to use technology to make teachers more efficient.

Julie Walker: Link in the show notes for IEW Gradebook.

Andrew Pudewa: There you go.

Julie Walker: So Andrew, we've never done this before, but it was pretty fun.

Andrew Pudewa: We should do it again.

Julie Walker: We should do another live podcast recording with an incredible group of people like we've had here today, even students who are willing to move to the front row at my compulsion. So thank you everyone. Thank you.

Julie Walker: Thanks so much for joining us. If you enjoyed this episode and want to hear more, please subscribe to our podcast in iTunes, Stitcher, or Spotify. Or just visit us each week at IEW.com/podcast. Here you can also find show notes and relevant links from today's broadcast. One last thing: would you mind going to iTunes to rate and review our podcast? This really helps other smart, caring listeners like you find us. Thanks so much.