[Auto-generated transcript. Edits may have been applied for clarity.]
Hello, everybody. Welcome on this Wednesday afternoon.

We're grateful today, here to be joined by a tremendous and interesting group of panelists on behalf of

the center for Innovation in Applied Education Policy at San José State University.

I'm Brent Duckor, and I'm here with my colleague, Dr. Carrie Holmberg,

and we're going to be moderating today a really interesting discussion as part of our Assessment for Deeper Learning series.

We've been playing with this the last few months, and perhaps for the whole year, the idea of making sense of machine-driven feedback in an age of AI.

That's generally what we're on about this year,

and we really thought the best way to begin to think about these topics and issues is to bring in experts, who know,

a heck of a lot, not only about AI,

but most importantly about the real work of teaching and learning in our public high schools and middle schools and elementary schools today.

We'll be talking with our panelists and we're going to introduce them in a moment.

But I just want everybody to know that primarily the way this is going to work is we're going to have a conversation,

and that conversation is going to allow for some flow and some hopefully creative moments and some aha's.

We're going to be working less from the idea that this is about Q&A.

So if you do put in something to the Q&A, just be aware that we may or may not be able to get to it,

in part because we really want to make time for our panelists today.

Before we get started.

One thing we've learned in the work of assessment is it's very important when you're thinking about concepts to sort of have a baseline agreement,

at least in part about what we're talking about.

And there's going to be a lot of different terminology and concepts that are going to come into play today.

But we'll at least say this right now as we start from our point of view, deeper learning knows what it's all about.

That's fundamentally what we believe in and what we want to see occurring in our spaces across the great state of California and beyond.

And for us, deep learning really means the skills and knowledge that students must possess

to succeed in what we're going to call 21st century jobs and civic life.

Those things are going to include dispositions and skills and

learnings that allow our students to really engage in deep critical thinking, problem solving, collaboration, communication,

and fundamentally to be able to exercise what some of us call higher order thinking in new contexts

that really allow our students to transfer what they know and can do when they come out of school into new environments.

So we believe deeply in this process. And part of what we see as the assessment role in deeper learning is what we call AfDL.

That is assessment for deeper learning, which fundamentally prioritizes assessing critical thinking,

problem solving, collaboration and communication, as well as core content and basic skills.

So we think of assessment for deeper learning as a good friend and a support

for any kind of deep curriculum work that's going on in our public schools.

Today. We're going to add one other concept and just throw it out there just so that if we get to it, we can talk more about it.

But increasingly, what we're noticing is that when we talk about assessment for deeper learning,

particularly with AI-assisted interventions, we're really now looking at things like machine outputs,

to augment human-driven feedback

and that human-driven feedback can be thought of in terms of self feedback or peer feedback or teacher feedback.

Tonight we're going to, today I should say, we're going to be talking about the writing cycles themselves or writing or what it is to become a writer.

And that's why we brought this expert panel together to move us in the right direction.

It's my pleasure to introduce Hilary Walker. Hilary Walker directs the Bay Area Writing Project at UC Berkeley,

where she has successfully led professional development for educators who are

committed to deepening the role of writing instruction across various subject areas,

not just English language arts. In addition to navigating complex research and professional development projects,

Hilary continues to explore writing as a power lever for civic engagement and equity focused school reform.

She's the author of celebrating 50 Years of Cultivating Growth How the Bay Area Writing Project supported my development as a teacher leader,

available at Writers Who Care.

Hilary has recently been exploring how I can assist teachers who teach writing and are working to support K-12 students who are developing as writers.

Thank you for being with us here today, Hillary.

Chris Mah. Chris Mah is a PhD student at the Stanford Graduate School of Education and a BAWP Teacher Consultant.

Chris researches connections between learning technologies, teacher education, and writing.

His most recent work explores the intersection of feedback and the effectiveness of AI writing supports in secondary schools.

Prior to graduate study, Chris taught high school English in Minneapolis, Minnesota.

He has published with his colleagues a study on "How do students use ChatGPT as a writing support?"

available in the Journal of Adolescent and Adult Literacy.

Kevin Dublin. Kevin is an educator and author of "Eulogy" and "How to Fall in Love in San Diego."

Kevin is also the director of The Living Room, San Francisco.

He has taught writing in the form of composition or creative writing at Duke University, San Diego State University, and East Carolina University.

Kevin maintains close connections to writers in K–12 schools and across the larger community through the Elder Writing Project.

And these are four questions that will really guide us today.

I'm going to read each one aloud.

First, what is most promising about the age of AI for the development of student writers in today's middle and high school settings?

Second, in helping teachers learn to use, uh, and to learn about and use AI tools for writing,

which approaches seem to make the most sense?

In helping students develop their writing skills and identities as writers,

what works and what doesn't work when using AI tools?

And finally, what do we still not know enough about in the development of students as writers in the age of AI?

Well, I think we are teed up now to really listen to our experts.

And let's start with that first question, everybody.

What is most promising about the age of AI for the development of student writers in today's middle and high schools settings, from your perspectives?

I'm itching to hear what Kevin has to say. Kevin?

That was funny. I was like, oh, okay.

Well, I mean, to me was most, uh, it was the most promising thing about it is that things are so open.

I mean, you know, right now in terms of.

I mean, we like... the scaffolding is really being created.

You have, you know, uh, you know, books like, uh, uh, what's the name?

Uh, Kahnmigo. Salman, Salman Khan, it's a brave new world.

It will revolutionize education. And, I mean, it starts with a lot of really great, you know, concepts.

And then it kind of is focus a lot more on, like, just its implementation of Khanmigo.

Uh, but it's just...

There's so many there. It's a lot of there are a lot of.

Thinking about youth, thinking about how they're so in, you know, I mean, screens around screens all the time.

And it just provides a lot of opportunity for practice, you know, with skills that we're already learning.

Now I'm dying to hear what Hillary has to say.

Well, I mean, I think I like the point that Kevin made, which is just about how students are already using tools.

And so I think there's what's promising for me is, in some ways

a more nonhierarchical form of learning that's happening between students and teachers.

So that I think broadly, I'm excited about that.

and I think that we're having so many conversations about the purposes of writing and the kinds of writing that we're doing and asking students to do.

...and I think those conversations are also starting to happen with students, which is very promising to me.

All right, Chris, you're up. Well, I'll qualify this by saying I'm not

an AI cheerleader.

I think AI probably will do some bad stuff in education and some good stuff.

And my orientation is that, you know, the degree to which it does bad versus good is is up to educators and students themselves.

So I'll qualify everything by saying that, that's said, I think some promising things that I'm thinking a lot about.

One is using AI to promote divergent thinking.

A lot of the conversation around AI is driven by this

implicit goal of building models that give the quote unquote "best response" to a prompt.

But to me, there's actually more promise in using AI to produce a lot of different ideas.

So with some, you know,

coaching around prompting AI can help students generate a range of ideas and perspectives that students might not otherwise have considered.

The second thing I'm really excited about is, I think you sort of alluded to it earlier, was expanding access to feedback.

Right now, individual feedback is one of the most high-leverage ways to improve writing.

But I've been a classroom teacher. I know what it's like trying to provide feedback for 140 students.

And it's really, really difficult--if not impossible.

So now with AI and again, some smart coaching around prompting or maybe some better tools,

students can get timely feedback at every stage of the writing process.

And not just, you know, once they've submitted a full essay.

And then the last thing which Hilary touched on is that AI is really forcing us to have really meaningful conversations about the purpose of writing.

Historically, writing has been used as like just a form of assessing knowledge.

And that's really it's very limiting.

And oftentimes what that translates into is we're teaching these formulaic five paragraph essays over and over.

My hope is that AI's ability to churn out this type of writing

forces us as educators to just rethink why we write and really lean into more creative writing and writing to think.

So definitely, but yeah.

I'm curious. So, Kevin, you talked a little bit about Khanmigo.

I'm curious if you've played around with the tool at all and what you think about it from a writing standpoint.

Oh, yeah. I mean, I've only in terms of Khanmigo used it from the educator side.

I just wanted to get an idea of, you know after, uh, forgetting that book,

like, oh, they mentioned tools or educators as well in terms of just.

Productivity and so...from that perspective, it made me,

It made me...I mean, there's the whole, like, larger, like, global implications.

I was like, we think so much about just reducing, uh, freeing time for just way more productive work, right?

So, you know, being able to out, you know, being able to quickly iterate, you know, from, you know,

from from an outline or from or from, uh, you know, previous work that we've, you know, we've we've already generated.

So that's like more the educators I haven't used it from the student

from like the student point of view, which there're different implementations.

I mean, that's more of like chat bot and help you with tutoring.

But I the thing like...

Just to expand on what you know, you were mentioning is just

like getting is like auto didactic.

The idea of, like, you know, just, you know, teaching yourself even as a part, being an active part of your own learning.

I think like that actually is probably what most excites me about it.

Now, if I can revise just because, you know, I mean, the best students, you know, of course, for, you know,

even when we're ourselves, our, you know, best selves as students is when we're actively participating in it.

And so, you know, being able to, you know, to.

To be able to quickly iterate as part of any part of the writing process,

to be able to get that instant feedback or being able to have conversations with, you know, your, you know, your teachers,

you know, about things and then maybe work through and revise even your questions and ideas and,

you know, kind of having this like, you know, kind of, you know, instant buffer.

That's, that's that's super, super exciting.

You know, it's interesting, I think one of the things that we've been hearing about the promise of AI is creativity.

Another is to generate more feedback. And then implicit in that is this idea of, you know, exactly what you're saying, which is this revision,

like something that we saw as a long and distant goal in coaching, writing for like 30 or 40 years.

It's in every single book that I ever read or tried to implement with student writing in my own writing as a student,

and revision was a really hard thing to do, and it's still a hard thing to do.

So it's just interesting to me that you're all sort of, I think,

saying there are opportunities here for best practice or good practice that we've always sort of pointed to.

But we may have more attempts that are generated by student motivation or student engagement more than us kind of saying, hey, everybody, go revise.

So I think it's ah, it's an interesting. Hillary, did you want to say something more about this question?

No, but I really like where you're going with revision as the thing that we aspire to as teachers of writing.

And yet somehow it feels like there are a lot of times when it falls flat or we are

perhaps not coaching students in the way we hope we can to revise in a meaningful way.

So I was I was hanging on to your every word.

Right. I can pick up on that revision thread and push this one step further.

A lot of what the work that Hillary and I have been doing with teachers is using

AI as a starting point to talk about writing as process rather than product.

So this is kind of what I was alluding to before. For a long time

writing is like the form of assessment, and it's a way of demonstrating knowledge.

And that's really, really limiting. And so if we can,

if we can shift teachers towards this idea that writing is a process and we should be focusing on making every part of the process transparent.

One, it addresses a lot of teachers' concerns around cheating because, you know,

writing is more than assigning a piece of writing and then and then getting a fully turned in paper.

You want to see evidence of the students learning during the process.

and then, two, pedagogically, we understand that the process is as

important as the final product.

So I think I one of the things I'm hopeful of is that it really forces teachers to rethink what writing assessment looks like and think

more about assessing different parts of the process instead of waiting until the final product is done.

I think in fairness to our teachers, as well as to my own hat, as somebody who hung out around people who design tests for a living,

maybe we also want to shift and invite test makers into thinking of writing is more of a process and less of a final product,

because the systems have been linked in a way. So perhaps teacher inclinations are related to what they've understood as high stakes testing.

And so it'll be interesting to see if those two things converge.

We'll leave that for a fifth question for another day. In the meantime, if I can not mess this up again...

Good. I got my next question. There we go. Brent, can I actually pick up on that last thing about...

Okay. Yes you can. Of course. It's your webinar. So I think you're spot on.

Standardized writing assessments are actually not true writing assessments because they don't approximate what real writing is.

We know that real, authentic writing is social.

It's not, you know, a kid sitting in an isolated room.

We know that real, authentic writing requires process and revision, and those things don't happen on a standardized test.

We know that real, authentic writing requires deep knowledge.

And oftentimes standardized assessments are asking kids to write about something that they don't know anything about.

They've just literally read one article, and now they have 45 minutes to write about it.

We know that real, authentic writing has a real purpose and a real audience besides a test.

A test evaluator now, probably automated testing assessment software.

So I think you're spot on. Test, test designers really need to be thinking about are we actually assessing writing?

Because standardized writing assessments are not actually very good at assessing authentic writing.

Can I can just quickly? I want to...yeah... just touch on on that as well

because I think that speaks to the like the fear

It's like, there are things we're excited about: education and writing and AI...

but I guess my greatest fear around it is, like, it's just reinforcing those, those standard models you know, of having, you know...

having you know, taking a test and then, oh, it's just going to be assessed by AI.

And so it's just going to, you know, it's going to reinforce these things because this is what we're trying to do.

I mean, we know like whether it's project-based learning or what like being directly engaged with.

With this learning, with the writing process, it's going to make everything stronger because it is a conversation.

You're like a part of everything. You're part of, you're part of this like, long tradition, you know, kind of going in that like, but, you know,

metaphorical part, you know, parlor that is happening and the conversation going on in your contributing to it.

And so like being an active contributor is so, so, so, so important. For my work, my version of Kevin's sphere is

a lot of teachers instinctively want to go back to Blue Book paper and pencil,

and I think that's also shortsighted for the same reasons that I mentioned about standardized writing assessments.

It doesn't really approximate what real, authentic writing is.

Well, I think we've laid out the case, and I think we've even showed

the promise.

And now I think this next question forces us all or I should say, invites us all into the hard question,

which is, which approaches seem to make the most sense in helping our teachers to learn about and to use these AI tools and writing?

What do we sort of feel like from the work you've all been doing is an approach that sort of makes sense to go what with what you're saying?

what you're saying directly? Chris, I mean to not go towards Blue Books, but to go to something else.

So what are those approaches? What do you all think? Well, I'd like to start this one off.

I think that one of the approaches that we find at the Writing Project works well for us is it's the idea of collegial pedagogy.

It's the idea of having conversations with other teachers to see what they're doing,

and to see what they're wondering about and to see what they're they've found in their own classroom

inquiries around writing, around writing with AI, around using different tools, more broadly speaking.

And so I think one of the approaches is really, how do we continue to put teachers in conversation with each other as the learners also?

And so, like, I think that's a structural approach rather than a tool-based approach.

I think just the structure of having, you know, engaging in those conversations

I mean, it speaks directly to the power of a bigger writing project.

And writing projects in general because I mean with generative AI

I mean, I was using it more, initially just, you know, task-based things to help and, and some other work.

I do some coding. And so it, it was, I was like doing research as part of this other like, potential project and, like, using this API.

And it wasn't until engaging in conversation with other teachers as a part of the invitational summer institute

where it came up and I was just like, "Oh, wait, here's this thing that's happening!"

And I was like...And I was like, "Oh, wait, no."

It's like, this is because students are trying to use this as a solution versus a tool

you know, as a part of that process-based writing.

And like, that's where the real issue is. It's not that

Oh, AI equals bad. It's, okay

How can this become a tool that students are using to aid the process?

They're already, you know, engaging in. Yeah, I can start my response by...I want to share.

I don't know what the right approach or right approaches are

but I think the wrong approach is what one teacher I work with calls the "Abstinence Only" approach,

which is let's pretend that the kids aren't using it and hope it goes away.

I think that is the wrong approach.

One of the reasons I think that's the wrong approach is, it really focuses on this, like policing mindset that focuses on,

banning the technology and cracking down on cheating and catching kids cheating.

It's very punitive and very deficit-based. And, at worst, it can actually widen the digital divide.

I'll give you a quick example here. A couple of months ago, I was facilitating some professional development around AI literacy and writing,

in a pretty under-resourced school district.

And I had to do it from a coffee shop because the school district had banned AI from their network.

A couple days later, I was down in the Peninsula with a more well-resourced school district and coaching

their staff how to use the tools and how they can coach kids to use the tools.

And so this is the kind of world we don't want to get into where you've got, you know, wealthier schools really investing in

critical AI literacy and less-resourced schools focusing on bans and cheating.

One approach that I think has worked really well for the lab that I work with at Stanford is I want to echo what Hillary said,

which is not tool first. We go in and if a school district asks us,

you know, "Hey, can you can do some professional learning around AI?" we ask them,"Well,

what are your goals besides-- put AI to the side--what are your existing goals?"

And we start from there. I said earlier, I'm not an AI fanboy, but I am a huge Bay area Writing Project fanboy,

and I'm hoping you can talk a little bit more about the what the teachers actually do together.

And in the BAWP model, specifically around like looking at student work and, and and doing like rehearsal demo lessons.

Sure, sure. So I think, yes, thank you for making me clarify that more.

In the summer institute model where we have the luxury of time.

I will say that too. We have the luxury of time. Teachers are sharing one part of their practice around writing.

And these are teachers from all different disciplines and all different grade levels.

And in that process, they are inviting the other participants, the other teachers in the room to do the thing to write,

to discuss whatever, the strategy is that they're approaching with.

Then we look at what their students produced doing the same thing.

And so, and then have the conversations that are really rooted in what are students doing, getting, learning, missing?

What are the questions that are still lingering for this teacher?

And it's an approach that does not suggest that we have arrived at a final answer,

but rather we're like actively trying to learn and learn with and from our students.

So that's that's part of the model.
But we also have, you know, folks coming in.

So in our last summer institute Chris came back and did a presentation based on newer research that he had conducted.

So we're trying to ground teachers both in their classrooms, sharing their classroom practice,

but also in what is the new research, what is cutting edge and what do we need to know?

When we're sort of isolated in our classrooms or in our schools, in our context for a while, we can lose sight of that.

So it is I think those are two of the key components of that learning.

I feel like this question is actually less about AI and more about professional learning.

Yeah. So I think Hillary is the perfect person to answer this question.

I think bringing in sort of a research perspective, the work of Linda Darling-hammond is really,

I think, useful for anybody interested in professional learning.

Some of the things that I think, you know she and her team characterizes,

most effective and professional learning is it's practice-based,

it's disciplinary, it's discipline-specific. So, you know, teachers are kind of focused on how to use the tools for their content area.

They bring in student work. It's collaborative.

It's ongoing. So not just a one-time workshop, but these are all the different things that I think BAWP brings to the table.

And I think AI has some unique challenges

but really this question is about what makes good professional learning.

And that, I think, holds true whether you're talking about AI or not.

Chris and others, I think you've discerned part of the approach we're taking,

which is that everything we talk about with AI can only be embedded inside of

what we know about research-based practices that have been around for many,

many years.

And more importantly, where really are those sweet spots where can we accelerate and try and test out in professional learning communities?

...with new tools, but not to lose track?

So I think we're absolutely in the same, sandbox on that one.

Well, maybe this is another version of it, but we're just trying to focus it back to the students,

because I think one of the challenges for research is going to be to differentiate not only what is the machine learning,

quite frankly, but what is the individual human learning.

And that human can be characterized as a student, could be a TOSA, could be actually a writing coach,

could be a paraprofessional, could also be a teacher of record for a particular subject area.

In this case. So let's just take a moment and say, so what do we think...

...this can help to move our students in the directions of, again, their identities as writers.

Because one thing we've learned from Hillary, and particularly the work of the project,

is this idea that it's about the identity formation as well of a student as a writer,

in addition to any process or product that comes as yielded fruit from that experience,

and that that's a developmental experience, that it goes on over time across, in this case, grade levels.

So what do we think is working or may not be working as well in the development of,

again, students, not just in their writing skills, but also their identity as writers?

The hard. The questions get harder, as you can tell. I can see, I can see, you know, I'm like, well, I would love to...

Sorry. Kevin. Did I cut you off? No, no, no. Okay.

I would love to lift up the work of one of our colleagues, Melissa, from our last summer institute who brought this really

riveting question about where does the, basically, where does the voice go?

And she looked at what her students had been producing in a poetry unit.

And when they tried to use ChatGPT and it it failed miserably.

And, and then the discussion that she had with the students about, well, what is good poetry and the students inevitably chose the

the real human written poetry versus what was produced by at least their their first attempt at ChatGPT.

And so I thought that that was like a really great way to non-punitively surface.

what are students doing and why are they doing it

and to have that conversation as part of their learning and then have them make some decisions about what they would do next as writers.

I think that is about like, who do I want to be as a writer? Or do I want to be a voiceless robot writer?

You know, I think that those are interesting questions for students to think about.

And I am not sure that students typically feel like an identity, a

really strong identity as a writer.

I mean, really at at many ages, I don't think that that's unique to any particular age.

So I think as teachers of writing, we we want them to see themselves as writers.

But we sometimes are working against that in the way that we're teaching writing.

So anyway, this is meandering a little bit, but, yeah, I just wanted to definitely shout out Melissa and her and her work.

They really helped me think about how to use use ChatGPT and like, ChatGPT produced things in a way that didn't feel like.

"Gotcha. I saw that you're using this. You failed."

But like rather. "Why are you using this?" And they really asked that question.

And did it do the things that you wanted it to do?

Anyway. Passing the mic.

No, no, no, I love, I love that. And then also thinking specifically about it seems like with creative writing, yeah, this is, it got me super...

Yeah

excited about because it's something that I had not, I had not really used any kind of, generative AI for creative writing related things.

Like at that point, uh, I had thought about it...

...but I think a great thing in terms of, again, that like larger like...

I guess, sort of like, you know, you know, meta usage of, uh, of generative AI or ChatGPT or whatever.

It's a part of it is remembering like mimesis

So much is like how I teach creative writing when I do it, it's like, "All right, we're going to look at this thing..."

"We're going to understand, you know, how it works."

And, and we can literally reduce it to what you like about it, you know, and then get to everything else later.

But it helps students in terms of, like, identity, think about what tradition that they're writing as a part of.

Right. So it's like, okay. You know, it could be as simple as "I like this use of refrain."

And it's like, okay, well, why does it work, you know, here? How do you like it?

And you can we, you know, engage these kind of conversations like in, you know, in person.

But we can also think about how you might engage with that.

You know, that same thing using, you know, using ChatGPT to get throwing in this, you know, comparing what you like and identify

around this specific poem or piece of writing compared to, you know, you know,

what it's saying, you know what techniques of saying are being used here,

being able to like the process of training as part of prompting, I think, like, you know, Chris, alluded to it

in the beginning of like, okay, like affect prompting and how how that works, like prompting really becomes a part of the learning process.

Right? So if you're...you know...

If you just throw in a poem and go, why do you like this?

That's not going to, you know, or like, "What works in this poem?" That's not going to really give you great results.

But if you've been studying, like various rhetorical tropes and schemes and you're either

you know, one thinking about ones that you already know, when you're typing them in there

you're copying and pasting definitions that you've written...

then it becomes, "Okay, now we're going to point to where that's used here, where this is used here."

And you know, what are some other writers who use this you might not know about?

And so it's like, okay. Then you're exposed to all these other writers that may not even be a part of the curriculum.

And that goes back to that, like that, that self-education and being like the active participant in the learning.

Yeah. As you were talking, Kevin, I was thinking about how loaded that word like identities is too.

Especially with language models that are trained on the whole of the internet and other texts.

You can almost think of some of these things as like a mirror of, of human, like a mirror of the corpus of human language, almost.

And so I think it's fraught territory talking about AI and identity.

I can I can share maybe one useful example of how I've seen

teachers work with AI tools to promote kind of voice and identity in writing.

I had a student teacher I was working with who built a unit around and "The Things They Carried."

And it had, you know, AI write a couple of different passages of writing in the style of Tim O'Brien.

And that teacher turned that into a little lesson around tone and voice and different types of literary devices.

And it's an interesting way, I think, for students to not just, like, learn the content of that,

but also to think critically about how did the algorithm, you know, come to this particular sentence?

What are some of the assumptions built into, um, you know, the algorithm writing this Tim O'Brien sentence in this way?

So that I thought was a pretty neat use of it.

You know, it's an important question.

A lot of times we look into the black box, that we used to think of as, funny enough,

formative assessment. We asked ourselves, "What is it that made a difference or could make a difference in student outcomes?"

And we thought a lot about what are the inputs, what are the process variables?

One of the things that are changing the trajectory of learning.

And now we know that it's actually machine learning that's going to be changing the trajectory of learning.

And the more the machine learns in a way that is exactly the way Chris has modeled.

It might learn, probably the more comfortable we'll all be.

But at the end of the day, it'll still require Chris and his student teacher,

and other human agents to know how to teach those interventions and those pauses and those, hey, wait a second.

These identity formations are coming out of, in some cases, biases and some cases cultural biases, in some cases,

racism, in some cases, things that are actually deep social issues that are implicit and need to be made explicit.

But it's going to be the teachers, and as Hillary would say, teaching teachers that allow us to uncover those things.

So maybe we aren't always asking the right question when we say, what is the AI tool?

What is its affordance and constraint? Maybe the question is: how do we figure out how to do what Chris just described?

And scale that as we interact with all this machinery, all this data?

All of these interesting large language model outputs?

It's got to be on us, is it not? To guide our students as well, so that they can be critical users.

I want to add one more thing on this question, which is kind of just calling back to this idea that's brought up,

been brought up a couple times of coming back to the purpose of writing.

The way that these, the pace at which these tools are evolving

there's probably a world in which a lot of content writing, you know, how to manuals and blog post.

A lot of that is going to be automated away. And hopefully what's left are forms of writing that are more tied to human experience and identity.

Which is why earlier I was kind of advocating for, you know, teachers to lean into expressive writing.

And maybe instead of writing an analytical paper that lays out your argument,

maybe you're writing a portfolio of pieces that traces the evolution of your thought on an issue.

Those are more, those are not only things that are more difficult for AI to do,

but also things that are intrinsically more and motivating for students to write about.

I think that if we can shift towards that world where we're using writing as less like

transmitting knowledge and more of a tool for thinking and tracing the process of your thought.

I think that's the more kind of durable form of writing that will be left over when AI has sort of automated away

you know your typical internet blog post or whatever.

So let me press on that to everybody because I think that's a tough point.

Persuasive writing is one of the genres, as I understand it, of writing you're writing.

Experts and coaches tell me. Am I right that I remember in eighth grade,

and maybe when I observe teachers in our own program at San Jose State, work with them on lesson planning?

You know, persuasive writing was something that one could teach, let's say, five years ago,

we took that fairly seriously as a way of encountering the Habit of Mind that I might call using evidence.

Well, like evidence is a part of argument.

And if you just make an argument without evidence, then I don't really know how to back up the claim you're making.

Can AI automate away the work of understanding as a writer and emerging budding writer in eighth grade

what evidence is or what kind of textual evidence is useful, and why

this evidence weighs more heavily than that? Because I would worry a lot if we thought that, well,

we don't need to do persuasive writing anymore because AI will generate, you know, within one draft, those arguments.

We now need to be working on creative writing. And I just would say, well, where do we learn about evidence and sift and weigh and struggle with it?

Did I get your attention? Now I'm going to be quiet and listen in because I want an answer.

I mean, I think that's something that Chirs kind of talked a little bit about earlier

just in terms of, you know, moving away from this, you know, five paragraph model.

Right? When we think about

some of the work that's even most persuasive, at least thinking on in the general public and not even within academia.

A lot of a lot of creative work

is really based on research.

It's not like, oh, just the muse of inspiration just comes and you write this thing and this is the only way.

It's there. I mean, I see, I see a lot of

research going into creative projects that imagine you were, you know, creating this portfolio of persuasive pieces on this topic

and you are conducting the research, and you're you know, you're

developing,

you know essentially what would be kind of like a bibliography and you're taking notes and all of those things.

But you're developing that into a, you know, a specific genre that might fit well to the audience in which you're engaging with.

Right? And that's like another thing that kind of, you know, excites me, I guess, you know, around things because

writing becomes the foundation of so many other forms of creation,

whether that's like, you know... to one degree it could be something like...

visual, like film, or it could be a sculpture, or it could even be a photo.

And thinking about like, artistic means or what might go as a part of on a gallery wall.

So that's one piece of writing that, that, you know, that might happen but it triggers something else that might

be able to make an argument in a in a way that sort of sneaks around any kind of block or that particularly fits that audience.

Well, as someone who teaches a lot of history, I've had some encounters with students using AI and it's gone very poorly.

I think I would never say moving away entirely from argumentative writing,

you need to be able to make an argument in a lot of different contexts.

And writing is one way of making arguments, but you need to be able to look at evidence.

You need to be able to see that, you know. There may be multiple interpretations of one single piece of evidence.

You may need to go through a process of figuring out which evidence best supports your.

your specific argument, but I think some of that is in some of the possibilities for perhaps like really interesting use of AI tools is

in like demystifying genre.

Like, students don't all come to my class with the same knowledge sets.

They don't all come to class with an understanding of

what the professor might expect when they assign an argumentative piece of writing

So there's some, there's something about, there's something exciting about, having conversations about genre or demystifying genre.

This is what I mean when I say, "an argumentative piece."

But there's also something about helping students to see that there are many, many, many possibilities for constructing an argument.

There are many, many, many possibilities for analyzing and evaluating evidence.

There are many ways in which you we have some alternative versions of history that need to be critiqued.

And if we're solely relying on large language models to to produce our history, we're in trouble.

We need to have some of those kind of foundational skills too.

So I don't know if that's like a pro, con , somewhere in the middle, of AI tools,

but I think I have a particular sensitivity around history and writing.

I want not exclusively creative, not exclusively argumentative.

I want a lot of different kinds of writing

and a lot of different ways that students are using writing to think about evidence and to think about what they actually believe in.

I think my version of that is that creative writing and, and persuasive writing are not mutually exclusive.

So I think, um, there's a scholar from University of Michigan named Laura Hall.

And she, she wrote an article about kind of problematizing argumentative writing and some of the ways that it's taught.

Oftentimes I think her argument is something along the lines of the way that we teach argument often entrenches polarization.

And really,

what we should be thinking about is the process of developing the argument and tracing your evolution of thought, less of this kind of black and white.

"I'm taking a hard stance on this thing" and more embracing kind of a...

...embracing some some uncertainty.

I think the way this gets operationalized in schools oftentimes is that the way we teach argument writing is here's an op ed on one side,

here's an op ed on the other side. Choose your opinion and then regurgitate the op ed that you favor.

That's not that's not persuasive writing. That's not argumentative writing.

That's summary more than anything. That's summary with your opinion.

So I kind of come back to this idea of process over product.

I think there's still a lot of room for, um, students to work through a difficult issue.

You know, the example I often use with AI stuff is like work through this issue of like, mandatory voting.

And maybe you're reading different different articles in different texts.

You know, 2 or 3 weeks over the course of three weeks, and after each one,

you're writing a response and you're tracing the evolution of your thought to ultimately come to, you know, your position.

That's a really different type of teaching argument writing than here's an op ed on one side.

Here's on op ed on the other, choose your side and summarize the argument.

So I think the initial kind of question was a really, really provocative one.

But I think there's, there's room for, for both. I think there's room for both.

And and I think that persuasive writing can still be creative.

I think it still can fall into process writing. Those are the types of things that I think need to be lifted up more.

And in, in this weird, weird future of AI that we're, we're headed into.

So I think what I'm hearing from the panel is that in a way,

we go back to the uses of AI will only be as good as the uses we're already putting into mental models of what we consider writing.

And if we see writing as this or that, or if we see it as synthesizing or merely summarizing,

or that we'll put those same questions to the outputs that our students are providing to us,

when we say, "Write a piece on exploring mandatory voting."

I guess my question, the meta question was,

"Will we get better results for our students that they will have to then curate back to the same old problem?"

Will we be right back to, well, how do I know if this piece of writing is more than just a regurgitation?

What would AI help me to know that and I'll leave it with one last.

Just quick thought before we go to the last question. There's a lot of implied what we call metacognition in this talk.

There's a lot of this idea of I'm processing my processing.

I'm reflecting on my first draft, my second draft.

I'm capable of having a space inside of my classroom where it's honored through

points and smileys and thumbs up that I am working through over the next two weeks.

this assignment. There's a lot of implicit metacognition.

There's a lot of implicit, I think, social support and cultural, linguistic support that's implied.

And so part of this is there's no panacea,

because we're still going to end up with having to work through the supports for kids and validating those supports.

Right. Would you agree with that? That we're still going to have to really think about what we're telling kids is the message about their writing,

no matter what tool they're using? Whether it's a pencil as a tool, whether it's an AI chat bot.

It's a thought. Definitely. I love when it was mentioned way in the beginning about transparency.

It's like a part of the process. Like that's key. Yeah, it's super key to all of this.

Yeah. Well, what do we still not know enough about?

Hoo! We got a Pandora's box. But what do we still not know enough about?

And what do we want to know more about? And what are you all curious about?

What are you genuinely curious about?

As expert coaches working with just swaths of student teachers and teachers of service and young people, just like

what's on your mind? I think I'm very curious about, how

students...well, I mean, I think this is a student-centered question.

How students will continue to see writing and to see development of writing across their schooling.

Yeah I think.

So that's like a very big question. But what it brings me to is like, do students see the value in the writing that we're assigning them?

Do they see themselves as writers inside of the writing that we are assigning them?

Will a tool or series of tools help them see themselves more inside of

that, I don't know.

So that's one wondering

I guess I would wonderm going back to one of the earlier points about feedback, if we can provide students with these tools,

like much more robust and continuous feedback on their writing, will that.

create students who are like, excited about continuing to explore and become more sophisticated in their writing.

I mean I'm genuinely curious.

I'm also curious about the desire to have a fast and quick

thing to submit and how we get students away from that.

Yeah. My initial wonderings.

First, I'm uncomfortable with the term expert because I've been studying this for, like, less than three years.

Join the crowd, I think, Chris! I really don't think too many people have much more time in the game, but I'm sorry.

I'm just honoring you and your hard work. Thank you. I appreciate that.

But I mean, I think the point is also, you know, we're all learning this together.

This is brand new technology that's changing every day. And so I think the term expertise is one that I try to use lightly.

But I appreciate it. Anyways, Brent. So I think for me, I'll start with kind of an "out there" one,

which is, I'm really curious to, to see where, um, like, what is the modality for writing in the future?

Will we live in a world where we're freed from our screens and keyboards?

I think that's a real possibility that we might talk about

writing in a different way than sitting at a keyboard and typing onto a screen.

There are lots of developments with multimodal language models that have vision and voice.

The translation features are really, really exciting for, um, language learners.

So I think modality and the fancy term is like human computer interaction HCI.

That's something that I think is a big question mark

but it has lots of lots of cool, cool potential. And then I'll keep repeating the same one.

But I think the other big thing is like, what is the purpose of writing going to ultimately be for our students?

What are the types of writings that will get automated away, and which are the ones that will that will remain valued?

That's the big question for me. Though you may be on mute, although it doesn't look like it.

Can't hear you. What about now? Let me guess.

Okay. Yeah, I might have unplugged that.

Uh, I think the. One of the things I was thinking about like.

You know... like...imitation and thinking about...coming from different writing

traditions. I think it might help accelerate.

Just. Like.

Like...how to say this...

The rate at which learners learn...

I guess just because it, you know, so much involves.

reading so much involves or taking and reading in various ways, whether you're listening, whether you're doing this conversation again,

how that's happening in multiple ways, how you how how much you're able to engage with it...

And, you know, I think about some of the super just like young, super

like talented, super just talented in that

"I engage with this a lot and I love to learn."

And I'm taking in all these other opportunities because I'm super excited about it.

...what... access from in terms of...

...access, it just, it's just like more people having more access.

But the other flip side of that is that I'm like, "Ooh, I don't know."

Because, you know, if there is a ton more people constantly using it.

I mean, like with the company, I mean, the computers, these models are like running on for...

...nothing that's unless you, uh, unless you use something like ChatGPT for all you're running it locally,

like the amount of water and energy that's consumed is, you know, it's a lot, so

the climate impact is a concern, ike, in connection to that, you know, that increase of use.

So we don't know.

You know a lot about that portion either.

Just in terms of what it looks like when there is lots of regular use, but like the International Energy Agency,

it's like put out some reports, just some initial things and it's like, "Wow, that's that's a lot of energy!"

... that's being consumed by this technology.

Carrie, do you have any thoughts about this last question?

I know you've been patiently moderating and looking at our Q&A, and it looks like we're good on the Q&A.

So what are you thinking? I think it's definitely going to change the development of students as writers in the age of AI.

I mean, it definitely will have an influence. It can't not. It's going to be big.

It's just not...so it's, it is a watershed moment in our history.

With the before and after.

But the "what"?

So, yes. We still do not know enough. It's more like, I'd rather, I'd prefer this question to be a yes or no, because then it'd be easier to answer.

I think it's too hard a question because of "the what"

I don't know, though the "what."

What is, yet, unfortunately, I think it remains to be seen and that we need to we need to be vigilant as teachers.

And I think we need to be braver in our own use in playing with AI ourselves

to keep exploring just so we can keep on peeling the layers of this question.

Because there is, as the AI gets because it's getting...smarter.

It keeps changing week to week. That's the nature of it.

I know it sounds like a scary movie, but it actually is true in this case.

Or at least I'm told by those who know more about it than I do.

And so yeah, I think, I think we have to keep learning more about it.

In the spirit of that, with the minute left.

We've got two questions that just popped in the chat the last minute,

Gabriel and Lorri have two questions, and I'm not sure we going to be be able to answer them with the panel,

but we're going to leave them as questions that we will work on in this assessment for deeper learning and AI series over the next, uh, year.

So stick with us.

One of the questions was, had there been some data collected in California or in other states that have shown the downfalls or benefits of using AI/ChatGPT?

I think it's worth asking those questions another time in another space.

We need to know something more about the evidence for these impacts and consequences.

Another question coming says what are your thoughts about the use of AI assisting a writer in describing

emotional depth for the purposes of creating genuine human connections?

So again, these are questions that I think are just absolutely there.

And I would say to us, let's keep drilling on them. Let's keep working together to answer them.

There's a whole question about emotionality. What do we know about social emotional learning?

What do we know about personal and human connection for our children? And how can these tools augment or processes augment?

But we also want to know, is there been any work done across state or within the state on impacts on tools like ChatGPT?

So, great questions. Panel, we thank you so very, very much for everything you've brought to us.

and for attending, all those who were out there in zoom land.

We're grateful to have you, everybody stay healthy, stay dry, and, we'll catch you around maybe in the future, if you don't mind.

Chris, Hillary, Kevin, Carrie, thanks so much and have a great day.

Thanks, y'all. Take care.