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**Transcript: Inquiring Minds Want to Know: Inquiry-Based Learning in the School Library with Lori Donovan**

Good morning. Good afternoon. I want to first thank Betha and Brianna and Christie for asking me to come and talk to you all today. This is a huge passion of mine. And so, I’m very excited to come and talk to you all here today about inquiry-based learning.

So, hello. So just a little bit about who I am. I am the K-12 Library Services specialist for Chesterfield County Public Schools in Virginia. I’m located just outside of Richmond, Virginia. So, on a good day, I am two hours to the beach, two hours to the mountains, and on a really, really good day, I can get to DC in two hours. But that has to be a really, really good day. Traffic around there is horrible. I have a master’s in education with a specialty in school librarianship. I also have a graduate professional endorsement from Longwood University. I am a national board-certified librarian, and it’s really hard for me to believe that I’m saying this, that it’s my 29th year as an educator. So, I started as an English and drama and speech teacher. I was a building-level librarian. I was very lucky that I got to walk out of my English classroom into the library and stay at my same school, so that doesn’t happen very often. Twenty-five of those 29 years have been with Chesterfield County. We are the fifth largest School Division in Virginia. We have over 61,000 students, 7,000 employees, and 64 schools, and we will be opening a 65th school this fall and a 67th School the following year. So, we’re quite growing, as the northern Virginia people keep coming a little bit further south. I’ve also published two books on school librarianship that you can see here: *The Power Researchers*: I co-authored with my, when I was still in the building, with my partner and here’s the literal book on inquiry, there is the *Inquire* book—*The Shared Foundations* from AASL. So that’s me professionally.

But we’ll go into now what we’re here to talk about, which is inquiry-based learning. And our essential question for today is, how do we avoid this?

(Video begins playing.)

“Hello, welcome to Energy Conservation Incorporated.”

“Thank you. I really hope to get a job here.”

“Well, let’s get started with your interview. What do you think are your greatest strengths?”

“My greatest strengths?”

“Yes, your greatest strengths.”

“What are my answer choices?”

“What do you mean?”

“My answer choices. You know A, B, C, or D.”

“There are not any answer choices.”

“Oh, I understand. In that case, I choose C.”

“You choose C?”

“Yes, I choose C. My fifth-grade teacher told me to always choose C when I did not know the answer.”

“Oh, it sounds like your fifth-grade teacher really prepared you for the future. Moving on then, this job will require you to write proposals about energy conservation. Are you a strong writer?”

“Yes, my teachers always told me that I write very good stories. I also like to write poetry.”

“Well, we will not need you to write poetry. Or stories. We will need you to write proposals regarding energy conservation.”

(In video, character shrugs her shoulders.) “Proposals. Is that like writing a persuasive essay?”

“Um sure.”

“In that case, yes, I am very good at writing ‘proposals.’ (In the video, character uses air quotes.) Every year at school, my teachers make me write a proposal regarding school uniform policies. I also wrote some proposals about banning cell phones in school. Would you like to read them?”

“No, I would not like to read them. If you get a job here, you will need to write proposals about energy conservation. Your proposals will need to include basic mathematical equations as well as scientific research.”

“Wait.”

“What is wrong?”

“I am confused.”

“That is not very surprising.”

“You said I would have to include mathematical equations and scientific research in my writing.”

“Yes. That is what I said.”

“But that doesn’t make sense.”

“What doesn’t make sense?”

“Math, science, and writing. They are separate subjects. I don’t know if I can incorporate math and science into my writing. They’re all very different.”

“Well, if you work here, that is what you will have to do.”

“This job seems very difficult. I do not think my public education prepared me to work here.”

“Well, I have to agree with you. I have one more question for you though. Why did you think you were ever qualified to work here in the first place? Why are you looking around?”

“You asked me a question and I do not know the answer. So, I am looking for someone to ‘think, pair, share’ with.”

“There is no one for you to ‘think, pair, share’ with.”

“Oh. In that case, I choose C.”

“I think I’ve heard enough. Thank you for coming in.”

(video ends.)

So, this is our big goal, as school librarians, is how to avoid those ‘I choose C’ responses, because we’re teaching students how to think, how to look at information critically; we teach them how to evaluate it. And the goal is for them to create an authentic product that demonstrates that learning, so that they can make that connection to learning and have it stick. Cause that seems to be one of the biggest things, is teaching that transferable skill. So, we want to get to where we could have kids who can integrate math and science into their writing, and be able to do research, to work collaboratively, to know how to communicate. So that’s really key. Inquiry-based learning can help move those skills forward.

In 2003 Daniel Callison did research on inquiry-based learning and inquiry-process models, and what he found consistently is, (and he used academic educators, researchers, as well as school librarians) that these are the five elements that play an important role when it comes to teaching students inquiry and inquiry-based learning. So questioning, exploration, assimilation, inference, and reflection. And I’ve color-coded these because, as we go through some of the work throughout this presentation, I wanted to make this connection so that you can see where they fit with inquiry-process models, with a group-based design and learning and as you move forward with that, and even connecting it to the AASL National School Library Standards.

I know you all had a question about students falling back into, teachers falling back into more traditional research kinds of things as opposed to wanting to do inquiry-based learning. But here’s really why I want to really stress that we want to do this, because it’s all about your design. And when you work with teachers to avoid those standard report regurgitations—that are boring not only for the students to do, the teacher to read, and they’re what David Loertscher calls “bird units”—it’s important that school librarians collaborate in the design to engage students. And that’s really what Dr. Maniotes is talking about. And one of the things that we’ve talked about nationally is the ease, when we all went to virtual or hybrid, how easy it was for kids to just copy and paste things and turn it in as their own work. I agree with her also as a former English teacher that students think there’s a perfect paper, and avoiding plagiarism and the stigma that comes with the ease of that academic integrity piece of it is knowing that you’re not gonna have something perfect. That’s why writing is a process, learning is a process, research is a process. Everything is a process, and there is no such thing as perfect. I worked up, matter of fact, I worked up on this presentation up till pretty much you all started coming on, so students need to understand that’s kind of how we have to work.

And we do that when it’s an assignment problem, when it’s just that regurgitation where you’re setting the kids up to do that versus the instructional design where you’re actually then creating meaning. And that’s what we want for our kids and why inquiry-based learning is important. Inquiry leads to curiosity and that’s the realm of what makes inquiry-based learning. So, through inquiry students discover they’re the ones driving the bus, as I say, that they’re seeing how questioning and the questions they create relate to what they need to learn, what they want to learn, and how they want to learn it, and that blossoms into research.

So those students who are really engaged and wanting to know more to understand. This is how the real world works, is we start with a question, we start with a problem, and then we move forward. It supports that deeper understanding, so it’s not that surface level. It’s not Googleable. It’s something where they have to really dive, they have to look deep, they have to look into, and it gives that better connection to the curriculum. And it creates products that they’re proud of sharing and I think that’s important, too. Because there’s a lot of voice and choice that’s coming into when you do inquiry-based learning. And when you develop these, of course, you want to do it in collaboration with your educator partners, because they’re the content specialists of that curriculum. Your content specialist is information literacy skills. And we want to make sure that we’re marrying them, and that we build on students’ prior knowledge, and build scaffolds, so that they can connect their prior knowledge with their new knowledge and create that new learning. And the goal is to make that transferable.

I also want to talk about there’s a little bit of difference between inquiry and research. Inquiry is the active engagement. So that’s the other thing, too. So, we want to make sure students are actively engaged. And they’re using their driving questions. So, it’s important for us as librarians to teach students how to ask good questions. And through that understanding, that those questions and the types of questions they generate are going to have different answers and different sources depending on how they write the question. And that’s how they can explain it. It also builds some metacognitive skills. So, they’re learning how to learn through questioning. If you’re a parent, you know that stage where your child is asking questions all the time, and you’re tired of hearing your name as a question, but that’s how we learn. And we kill that in kids when they go to school. We need to get that curiosity back, that engagement to wanting to know why.

Research can be a component of inquiry, but really what research is doing is finding the answers. So, you give them the question. They’ve got it. They’ve got a research question they have to answer, and they look for the answer. There’s not really a lot of inquiry involved in that process of finding answers, per se. So, while research can certainly exist as a standalone process, inquiry should ultimately drive students to view research as a means through which they seek out new ideas, answer new questions, and wrestle with complex problems, and build that stamina, that persistence, that grit. So, some of the soft skills now come into this when you include inquiry-based learning as part of your practice.

There were also some questions from you about the difference between inquiry-based learning and project-based learning. So, I just want to point out where there’s a lot of similarities and there’s some differences as well. So, inquiry-based learning is discovering answers through questioning. So, the whole process is developing those questions and finding those answers. It’s going to cover of course the curriculum outcomes, because that’s why they’re doing this, but it’s coming from the route of student curiosity. It’s like, what do they want to know about that particular topic, and what you as the librarian and the educator partner do is create it in such a way that they’re going to ask the right questions to get to that learning goal, that they’re going to get that content covered. Flexible, so a lot of voice and choice in how they present information and moving through that. And it informs the teacher there. There’s a lot of formative assessment that goes on through that, through these questions, through these directions, so that you’re more that guide on the side as opposed to giving direct instruction. That is not to say that direct instruction is not applicable when you do inquiry-based learning. There is going to be necessary for how to do inquiry, especially depending on where your learners are in the research process, to see then how to evaluate materials, to decide is this going to answer the questions, how. So direct instruction doesn’t go away with either inquiry-based learning or project-based learning, but it’s not the be all, end all. It’s not the only thing that happens between PBL and IBL. PBL is more about exploring the answer.

So, we use the Buck Institute for Education's project-based learning format, and it starts with the driving question. It’s usually a driving question that comes out of, what is the ultimate essential question. What is the learning goal? And students create a need-to-know set of lists. What do they need to know in order to answer that driving question? So, it’s a little bit different than discovering answers through questioning. They still use questioning. It’s just how they use the question is different. This can be a long-term kind of thing. But we have done short-term projects. That’s another myth. I kind of think that it doesn’t have to be this all-encompassing project for project-based learning. It takes it to a level where they’re actually doing a lot more of the problem-solving, tinkering. There’s a lot of prototyping, a lot of design thinking is part of project-based learning that may not be necessarily part of inquiry-based learning. It could be, but that’s not necessary. Project-based learning really is that hands-on application of learning, and that’s the big thing with project-based learning versus inquiry-based learning.

And again, it’s still active. Students are very much in control of that learning, and that process, especially when they get to the tinkering, the, what they call ‘the community experts,’ your ‘public audience piece’ is what is what Buck calls it. But they’re the experts that come in and help, so you think about, Brianna, you said you're in the Washington area. So, Boeing, and I know PBL is very big in that area with Boeing being there, so having Boeing engineers come in and talk about building a good airplane that’s going to be faster and that, so they would work through that. Both of these emphasize teaching and learning as opposed to just the content piece of it. So, it’s how students approach that learning to get to the content piece. So, it’s not all about just, I teach, you learn, and we move on. It’s very experiential. It’s hands-on. You can use either or both of these to help students become independent thinkers, students who can gather information on their own, question and interpret it, form their own evidence-based conclusions. And in this modern knowledge-based global economy. That’s what our kids have to be able to do. So, we need to provide them opportunities to practice those skills, and a real-world setting wherever that is, and that’s just so important to have. So, a little bit different but a lot of similarities with both.

Now I want to talk about some inquiry-process models, because these five elements that are here, and I think that the link is coming either in your chat or you got in your content. Anyway, I’m going to talk about four process, inquiry process models. These are not the only inquiry-process models that are out there. But when I was writing the book *Inquire*, when I was doing research, these were the four that I found the most information on and seemed to be the ones that most school librarians are familiar with or at least have heard of. But remember, we, as a subject expert, matter. That is our subject matter expert area. We are inquiry-process people and how research fits into that process. Since teachers are not taught this, maybe if they were English Majors, taught about the research process in their teacher education classes, it really is up to us as that subject matter expert to share that knowledge and process with our teachers. This special expertise is a major contribution to students learning in school. It’s a great way for us to show how we impact student learning, is through this collaborative partnership. And I think that’s what’s really neat about these.

The first one I want to talk about is guided inquiry design. This is the one we use in Chesterfield County. The reason why we did this, why I chose this, I’m gonna be honest. I chose this one for our district to use, is because we had just put out our strategic plan for the year. We were transitioning to project-based learning and this one really matched that Buck Institute’s model. Dr. Maniotes, who the quote was from earlier, is the national trainer and she has come out to Chesterfield over several years and done some training. If you had a chance to look at the presentation that was shared with you by Catherine Roots Lewis, Norman, Oklahoma uses guided inquiry design. That is much more embedded in their program. Ours is really for inquiry-based learning and projects that we’re working with teachers. This also is part of, as Virginia has moved away from the mandatory testing, how often we test students at Virginia was outrageous. So, we were moving to what are considered performance-based assessments. And librarians were lucky to sit on the committees that did those for those four core contents areas. So, we were able to really infuse GID through this. All of these inquiry-based models, you’ll have a copy of the presentation, link to resources, lesson ideas, all sorts of things that will help you decide if you're looking for an inquiry-process model to use that’s there. So, all of these are live links.

The next one I want to talk about is Big Six. Big Six was something that we started when we started to transition to digital content integrated into curriculum because this one is a little bit more straightforward. This one has been around longer. Bob Berkowitz and Eisenberg have done this. Big Six is the secondary level, Super Three is elementary. And it takes them through a process. None of these are linear. You see it’s all circular or that, so I want to make sure that we understand none of these are even though they may look linear. They’re not. As a way to go through any type of critical thinking skills was the basis of what Big Six is. So, I would always introduce this to my students with, “Hey, you have a set amount of money that you get to spend, and let’s go through this thinking of this process,” and I can walk them through the process very easily. So, it’s a great way to look at understanding process models and the incredible thinking there. They have amazing resources on this site. There are lesson plans, there are worksheets, there are planning guides, all of that’s there on their site.

The Stripling model is named after Barbara Stripling. She is a former ALA president, AASL president. This one is a little bit more complicated. It’s got a lot more steps to it, much more in-depth. The Library of Congress uses this particular model when they do their primary sources workshop in the summer. I like this one for a lot of like Capstone-type things that are longer, and they have more time to really dive deep into this inquiry process that’s there, but it certainly doesn’t have to be there. But it was one that we had considered looking at, when we were looking at project-based learning. I just felt like guided inquiry design really connected more with the Buck Institute’s PBL model.

The last one I want to talk about is Pathways to Knowledge. This is sponsored by Follett. I think this one is really great to look at from a Humanities standpoint. This is one that really because it focuses on appreciation, and it talks about exploring relationships and making connections to that. So, I think that’s it’s good. Again. This one is not linear. It looks linear, but none of these inquiry search process models are linear in nature, because that’s just not how learning goes and as it works through that piece. So those are four inquiry process models that I talked about in the book, but I think are also ones that are easily replicable in your schools.

So, talking about thinking about inquiry-based learning. What does that mean? The first thing is our role. This particular study that’s here is from Keith Curry Lance and Leslie Maniotes. It was done in Colorado a couple years ago. But Keith Curry Lance has been doing library research in the role that librarians play the instructional role librarians play. In test scores and what he has found consistently over and over and over again, and this initial School Libraries Counts study has been replicated 20 times. And each time it has come out that, when you have a certified School librarian in a school library in your school, test scores for reading, writing, and math are higher than schools who do not have a certified School librarian in their school. Twenty times this has been replicated. This particular study gets a little bit more granular and what they studied was in Colorado. They looked at school librarians who facilitated student-led inquiry lessons weekly, versus those that did not. The difference here is outstanding. Using technology, there’s a 30% increase in the statistics of student knowledge being kept. There is work collaboratively on learning assignments. There’s a 40% difference in how well students worked collaboratively when they were facilitated through information literacy skills. Critical thinking, applying critical thinking research. There was a 30-percentage difference, being a good digital citizen, using information ethically and responsibly. 30% increase. 20% increase in using variety of sources when they had that librarian doing this inquiry literacy skills. And evaluating information credibly. It was a 30% increase; students were better able to evaluate information critically when they had these lessons.

So, the important role that librarians play in inquiry-based learning and student knowledge is key. And when you go have those conversations with your principals, because they are data people, when you use an inquiry research model, data shows we have that increase in information literacy. You just saw that on the previous slide. There’s growth and knowledge of curriculum topics. So students are retaining the information that’s being taught because they're using the inquiry-based skills, because it’s more student-driven. Reflections of student interests, feelings, and experiences. So, the why is there, students are feeling engaged with the topic. Research shows when students are engaged with the topic, learning happens, learning sticks. And the development of critical and creative thinking skills, it builds communication and collaboration skills. So those two, I hate saying being 21 years and 21st century, those 21st century 4C scales that are so crucial, by doing this you are teaching students how to critically and creatively think. You’re teaching students how to communicate and collaborate because they have to be taught this. This is not something that students innately have, and we see that, we see the kids that get along with kids, and the kids that don’t, so teaching them how to be better communicators and collaborators. This is what this does, and this is what you can take to your administrator and say, “Hey, this is what I can do. Here’s what the research says. Here’s how I can help improve our scores.”

When you go to think about planning an inquiry-based unit, I just want to give you some things to think about, and I related them to the domains within the national school library standards. So, thinking about who or what are your entry points? Who’s going to be willing to do this with you? You have those teachers that are creative risk-takers. I always tell my new librarians, is to go find the new teacher in the building, and you know who they are because they’re the ones with the deer-in-the-headlights look, to work with, because they’re going to be willing to work with you. You want to make sure that you are establishing what competencies you want to measure to demonstrate inquiry-based learning skills. So, you want to go back to your national standards, and I’ve linked the learner competencies in this presentation as well as the subject matter that the teacher needs to get across so having that done. What are you going to be? What can be done to move it from that traditional research to an inquiry-process unit? So, looking at those five elements, looking at an inquiry-process model, looking at problem- or project-based learning. Those are ways to kind of step that up so that you can put inquiry in there. Who’s gonna hold you accountable? Well, hopefully your educator partner will, your students will, your admin will. Again, this is information stuff that you can document to your administrators to say here. Here’s how we’re impacting student learning and that’s always important.

And then how will you know when you are ready to create a new unit? That comes in reflection, so formatively and summatively you need to be reflecting with your educator partner. What’s working? What’s not working? What would you do differently? But it’s also important in, what you see in all of those inquiry process models is student reflection. And I know that time is such a precious thing, and even more so now if you’re in a hybrid or a virtual world where teachers are paring down really almost to the bare bones of what has to be taught, and things like inquiry-based learning, project-based learning, research, become extra. But what people don’t understand, what the teachers don’t—and I get what they’re, I totally understand what they’re going through—but the impact of learning by using an inquiry and going about it from the inquiry-process mode, is how to make that stick, and it’s going to be remembered. And it’s going to be yeah, it’s going to take a little bit longer, but the learning impact is going to be so much more, and so getting feedback from students is also going to be key.

Some other things to think about as you're planning—this is from Teachthought, I follow them on Twitter, I think they are amazing—is making sure when you start thinking about planning this, that there is interaction, that students are really interacting with the information. So, engaging their prior knowledge. They’re looking at new knowledge so that they see the need. So, Simon Sinek’s “Start with a WHY” is a great thing. I wish I knew then when I was in the classroom as an English teacher what I know now, how I would answer. Why are we doing this so much differently than I did? Well, it was in the curriculum, we kind of have to do it. I would have been able to give them, really have them understand why we're doing this, and what we hope to learn, and I would realize that, they’re asking me this, that I haven’t explained what we’re doing correctly, making sure that students as they go through questioning are getting clarification. We’re building their scaffolds in so that when they get conflicting information—we always had students have to come in and do that position paper, and we would have kids come in doing steroids and the belief that all steroids are bad because that’s what the media has told them. They’ve heard about it in sports. And when they realize that not all steroids are bad, it’s helping them with those questioning, that next level, that questioning. So, what happens when they come up wit’ information that's different from what they thought or assumed or went through and what do they do? Then what do they do? And how do you keep them going so they don’t give up? They build that persistence. They build that Grit. And then making sure everything that you’re doing provides them with that information access that they are seeing that relationship build. They’re seeing those connections. So, when they make that learning project, it justifies the process that they can see and make that connection. So that’s not and I think that’s probably the hardest thing is the design, is making sure, but again, like Dr. Maniotes said, that is the issue—design something that's going to engage the students from the start of the project to the end of the project, so that learning happens and then that learning sticks.

The other thing I think that’s important is coming at it from a wider lens. So, if that’s just too much for your teachers to think about, because of what’s going on right now, but as you think about at the end of the school year and you move into your second year with this project, is to look at the 3Ds: discover, discuss, demonstrate. So again, finding that curiosity key, where they’re going to want to learn more about it. What are they going to want to do? Have that discussion piece. Again, direct instruction is still important, but it’s not the only thing that should be happening. Students should be having those learning experiences, looking at, exploring their questions, exploring their wants, talking to each other as they’re learning through the process, and you are facilitating from the side. And then again having some type of tinkering design process. Design doesn’t mean I have to actually make something. But they’re making something to demonstrate their learning. So, whether that’s tinkering, whether that’s revising, writing, process, moving through that, but making sure that what they know before what they connect to the new learning and have it saved. So that’s important.

So, this might be one way to get your teachers to be on board. It might be a way for you to open the conversation with your administrator to say, “Hey, look here’s the 3Ds. Here's what we want to do. Here's how we kind of do it.” And what I wanted also to talk about with the 3Ds is this happens at the beginning, in the middle, and at the end, so these 3Ds don't happen in isolation in and of itself. So when you start the inquiry, they’re discussing with the teacher. They’re discovering with you. They’re demonstrating. Okay, so they came up with a research question, and they came up with some follow-up questions. So that’s gonna lead them to the discussion. So, they’re having an opportunity to explore, they’re working through the resources. They’re developing more questions to move on, you are providing resources, you’re providing scaffolds to move them forward, so that they can get to demonstrate. So now they’re gonna take all that information and put it together. And be part of that process. So, it’s something that goes on all throughout the process so they should be doing all three of these D’s in each section of the process. So, it’s not insular. It’s not in and of itself and again, you see it’s very cyclical in its concepts and nothing linear about inquiry-based learning.

Going back to my color codes. Because I know there was also a question about differentiating. So, when you think about having gifted students, special-needs students, your EL students still can do inquiry-based learning. All of them can do inquiry learning, tying it to looking at the different learner competencies, and that’s what these are. So, across the top you’ll see these are the six foundations. These are the four domains. And then I’ve color-coded it to those elements so that you can see a lot of stuff happens in that assimilation. Where they’re really synthesizing, because that’s really where the learning is happening, is in that as they take what they learn, what they found, where they notice their gaps are, have to go back and, hopefully have to go back, and fill in those gaps, and they work through that so that they can get to the sharing and the piece. And I think this is a good way, too, of showing your administrator how your national standards can compare and meet your school’s goals and with instructional goals of other contents as well. So, these are not all of the learner competencies. These are just ones that I feel like really hit that, so you can see where you could differentiate depending on between a gifted student, a special-needs student, or an EL student. So yeah, like I said, I do have some resources for you there to continue to keep thinking about the process for you.

There’s my contact information. Feel free to contact me or follow me on Twitter. Thank you all for your time today. I appreciate the opportunity to again speak to one of my passions: inquiry-based learning.

*\*Small edits have been made for clarity.*