**Transcript: Space Planning for Flexible, Innovative Learning Environments with Betha Gutsche**

We’re going to change directions a little bit. But of course, everything is interrelated here. And we’re going to talk about space planning and talk about the physical spaces in which all this learning is going to be happening.

So, we have learned a lot about Connected Learning over the last couple of sessions, and we’ve seen examples of the kinds of activities where this happens, but this is all about how the physical space—where Connected Learning takes place makes a difference. It shapes how learning happens. So, I want to first look at some of the dynamics of learning, of the kinds of things we want to happen, and then talk more about how the physical nature of the space can make that work better, more fluidly.

Starting with, Connected Learning is really hands-on. It’s that participatory hands-on learning, and by doing that, it really engages that hand-brain connection. So, when learners are offered these multiple opportunities to actively engage with objects, and to interact with each other, work in teams or work with mentors, and then reflect on what they’ve discovered through the process, this is where that greater learning really takes place and this learning in an opportunity-rich environment. So, keeping those, that triad of the Connected Learning components in mind, and an opportunity-rich environment, that’s the physical space. This is where the skills-building starts, or it happens, and where relationships are built as well. This is all about the relationship aspect to Connected Learning, this idea that it’s inclusive. And Gina mentioned being inclusive in your makerspace, where everyone can participate and the whole environment really promotes those social connections. So Connected Learning spaces foster a sense of community and participation. And when people are participating in a community, feel like they’re part of community, it increases their motivation to learn. And this applies to all ages, just really creating a situation where people will naturally, kids, adults, will naturally be inclined to be working together. And this idea that in a Connected Learning space challenge is constant, and it’s multifaceted. Participants encounter ever-changing situations. And this is what captures their interest and compels them to really explore and work together to co-create solutions. So, this is that intersection of all three: the interests, the relationships with peers and mentors, and the opportunity-rich environment.

These examples here are from a couple of libraries that participated in our Small Libraries Create Smart Spaces Project, which Brianna and I have been involved with for years and I think we’ve mentioned to you. On the left, these are teens working on a lockbox mystery challenge, so not a lock room, but it’s all contained in a box because they don’t have a contained room. But they’re obviously very engaged. It requires that they work together, and the space just allows them to feel comfortable and feel natural and very right for them to work together. And then on the right, I love this space, it’s from the Ignacio Community Library in Colorado, a very remote community. And it’s hard to tell who’s mentoring who here: is the adult mentoring the child in how to use this kind of equipment for recording, and broadcasting, and video making? Or is it the other way around? It’s very possible that that child is mentoring the adults. So, it’s just creating that environment where you have mixed ages working together and reducing the hierarchy so that mentorship can work every which way. These examples: I think gardens and kitchens are just really great examples of how learners find what interests them and then discover how interconnected everything is. So, in addition to learning, like, how to grow plants, which is sort of the natural outcome of gardening, the garden experience leads to education about nutrition and healthy eating and environmental health. So relating to that environmental impact, as well as learning accountability, because if you're a gardener, you learn pretty quickly if you don't nurture and attend to your little starts, they will not produce as you hope they would. And then in a kitchen example, there's so many possibilities for Connected Learning. It's yes, people, children, adults, whoever will learn how to cook, but beyond that they are also learning about nutrition and health about the science of food and cooking and nutritional health, and there are so many opportunities because anyone who's cooked knows that things don't always go according to plan. There’re so many opportunities to encounter challenges and have to work together as a team to come through with a solution. So, another ideal intersection of that triad of Connected Learning components.

There are, so those are all sorts of the dynamics of the kind of learning, but there are these key characteristics of what constitutes an inviting, engaging, physical space. And these four components come from a study that was done in 2016 by Shannon Barniskis, who was at that time a graduate student or a PhD student. And she did a study of makerspaces and identified these four qualities of what makes them inviting and engaging, or not, and they are: exposure, flexibility, control, and expansiveness. So, we’ll look through each of those individually.

So, starting with exposure. This is all about making the tools visible and accessible. Putting them out in the open. Of course, you want to keep them somewhat organized, putting them in bins, but having those bins transparent, make it very clear what’s in there. So, I would generally say avoid big cabinets with blank drawer fronts where, and I’ve been in spaces like this, where you’re just opening every door like, “Oh, what’s this? What’s that?” I mean that might be actually good for exploration, but it’s just so much more enticing when you have the tools lying around and out and visible. It just inspires thinking about, “Oh, I want to do this. Hey, there’s that tool.” Or, I mean, I think it usually starts from the project. I can think of conceive of something I might want to do, and then you look around and like, “Oh, okay. These are the tools that might make it happen for me.” So and I know there’s always a tension between wanting to keep some control, that control word, over the organization of the space, and there might be a need at times to have things in locked cabinets, but I just say in general, if you can possibly do this, really try to have things out and available. Another aspect of exposure, and I think Gina referenced this several times today, just the messiness. That if you have projects in progress that are left lying around, it might look messy, but it also looks inspiring. So, when other people walk into the space, they’ll probably immediately start clicking on, “Hey, wow, that’s cool. I could do that, or I could do something like that, or that makes me think of something related.” Same with, if you don’t want them out on the tables all the time, have some open shelving where they can be stored as projects in progress and display the finished projects. I know I don’t know if any of you’ve been to these paint-your-own ceramic studios, where people go in and you get a blank ceramic and you paint it, and they fire it for you. I love it because they have finished products lying all around and, in the window, and that is just so inspiring. It’s so much more inspiring than walking into a blank, neat, tidy room. So, I love that Gina celebrates her messiness and I encourage us all to do that. It might require a little letting go but that’s part of it.

And then that second element: flexibility. So, this idea of having everything modular. Instead of having large tables, have these modular tables that can be put together, if you need everyone sitting around the same table, but can also be separated. And I’m wondering, I found these wave tables from Demco and I’m wondering, Shelley, if those are the tables that you’re ordering for your space. They look very workable. And thinking about the various configurations. Do you want two at a time? Obviously, you might want one at a time. Do you have room to have three or four at a time? And then putting everything on casters. I’m a big fan of putting everything on wheels. And yes, Brianna, and I love these, and this includes what you might consider heavy and immovable things like your shelving, like everything can go on wheels.

And just to reinforce that point, when I say everything, I mean everything. And this is a wonderful example from outside the library world. This is actually from the Lamb Weston Innovation Center, where Brianna's husband works, and where they do research on innovating around potato products. So, this is a test kitchen and they put everything on wheels, including the stove, the refrigerator. I’m not sure about the sink, whether it’s, yeah, I think the sink even is on wheels because the faucet comes from a wall fixture not attached to the counter. But yeah, don’t limit your thinking. I do advise when you’re thinking about heavier awkward-shaped furnishings, to put on wheels, is to go to an industrial caster source, like there’s an outfit called Granger, which has been selling casters for years, and make sure that you’re getting a size dimension, weight bearing, that’s suitable to what you do want to move around, because you don’t want inadequate casters, that could be awful.

And then this idea of control and really what we mean by control is relinquishing control. This is handing the space over to the users. It’s about, and this, it also involves a lot of letting go. Invite users to configure the room according to their learning needs. And even better, and I know I think this is happening with the Montana group, invite your learners, your students to actually design and construct the space and the furnishings. I just love that you’re having your CTE students think about designing furnishings. And for you know those of us who are managing this space, it’s a matter of, like, getting comfortable with the idea of letting the users, letting the kids decide how they want to arrange their workspace, what works best for their learning, and just letting that happen. If you feel the need to reset the furniture at the end every day, just know that you can restore order when you have the opportunity, But it’s just that whole idea of sharing power and allowing the users in the space to have ownership, because that is really where they’re going to take charge of their learning. They’re going to use the tools and equipment in a way that suits them, not in some structure that’s being forced on them. And I heard that from Gina: just, here’s an opportunity-rich environment, you come in, and you figure out how you’re going to use these things and what you’re going to do with them. And I mean that end result of all this is that your learners are more invested in the space and then more invested in the library as a whole.

So, this notion of expansiveness, it’s about creating a space that encourages exploration and imagination. So, it’s about keeping the space open-ended. So, there’s a sense that learners are encouraged to explore new activities and the way that’s sort of baked into the physical arrangement is, I think it’s really nicely Illustrated in this school library on the left, of just so many different ways to occupy the space and regroup the space. Do you want to gather in a circle on one of those mats? Do you want to pick up those really intriguing circular cushiony seating things and take one into the corner and sit by yourself or find a little grouping? And just that ability, goes along totally goes along with flexibility and relinquishing control, is just making it clear to anyone who walks in the space that they are invited to do this. They’re not having a structure imposed on them. So, it’s just allowing them to be spontaneous and following their interests and then using their imagination. You know Gina, I don’t know what those colorful cylinders are. If anyone does some product research and finds out, I’d be really interested. They don’t quite look stiff enough to support weight. So yeah, I’m curious. I was intrigued by the color and the shapes.

So I’ve added a fifth element, which I think of as Equitable Space, really looking and examining a space, once you’ve sort of thought about all those other elements, and you feel like you’re going on the right track, then take a few steps back and really think and look hard at it, for how equitable it is. And so, I think a good exercise for us to start that kind of thinking is to look at this image. And this is a group of middle schoolers from Big Walnut Middle School, gathered around an interactive touchscreen table, which is a really cool technology, very techy and I, often this is the kind of technology that administrators and others get really excited about, teachers like, oh we’ve got this great technology. We can do all these learning things. But with the equity lens on, what might not be equitable about this space? And please pop into chat just what thoughts come up. And thinking, you know thinking about accessibility, on one level, is one level of creating equitable space. Yes, can a wheelchair access the tabletop? Is it a suitable height, is it an adjustable height? Maybe you know, maybe that’s the technology that it’s really important to invest in. What else? How many people can use it at one time, and can only one write at a time? So that yeah, that’s, I mean one approach to having a cool technology is orienting users to some protocols, like having them understand, can only one write at a time. It’s kind of like being in a zoom meeting—if two people try to talk at the same time, one cuts the other out, so if this is a dynamic of the technology, just helping people understand how to, how it works. And then how they can best share the way it works.

When you mentioned, Angelica, “one at a time,” that made me think of actually when Gina earlier mentioned the student who built that amazing Ferris wheel all by, I think it was he all by himself, that made me think that maybe some students work best alone, that always thinking that this has to be a group maybe isn’t the most equitable way to use technology. There may be situations, occasions, students who really work much better alone. And can they have some alone time on fancy piece of tech like this? Any other thoughts? Oh grouping. Yeah, very good, grouping according to skill level. And especially thinking about some kids who might need special assistance on a technology like this. If you just kind of throw everyone in together, I mean, who’s gonna naturally dominate, who’s going to feel less included? So really thinking about that ahead of time. So, think about equity in terms of the way you’re programming in your space as well as how you’re setting up the physical space. How can you, and you know, some kids are introduced to technology at a very young age. They’ve got all kinds of fancy touchscreen stuff at home. And so, they take to this very naturally. And other kids have not had the same levels of privilege and need more orientation. I think of it as scaffolding. So how can you help kids who had less experience work their way up to this level where they can just walk up to it or roll up to it and feel very confident? And so yes, it is only available for small groups. So also thinking about who, how you’re choosing those small groups? Is there, if you just sort of leaving it freeform, is there one group that always walks over and dominates the table and how can you make that more equitable? Which is really interesting when you start thinking about the control element, is maybe there are way, there are reasons to introduce some amount of control in in sort of guiding a more equitable use of your space? Oh Christy, good one. Students have vision impairments. What would they be able to do with this? I don’t know. That’s a really challenging question. And that’s a good thing to think about as you’re purchasing equipment. What is the impact for hearing-impaired, vision-impaired? So, I encourage you to keep all these kinds of things in mind and really, you know do as much as you can. Of course, we all have limitations, but just have it in mind. How can you make your space equitable? And thank you for your good ideas here.

So, let’s think a little bit about preparing a space. I think all of you have this opportunity to kind of start with a blank canvas and reconfigure your spaces in a variety of ways. So, I want to look at some of the things that might get in the way of that reconfiguration. First of all, I don’t know how possible this is for any of you, but if you can clear your space before you commit to how you’re going to reconfigure it. I have found from working with other small libraries in the past, that it can happen that whatever’s existing in the current space, whatever furnishings are there, and shelving and all that, that can block creative thinking about how the space might be used. So, if it’s at all possible, if you can clear all that out, so you have a literal, physical blank canvas in front of you, that can really open up more ideas about how things might work and flow within that space. So, I know it’s not always possible. But if it is, you might be amazed at how it just kind of clears your mind.

So one of the challenges that comes up first, I don’t know if this is true for any of you, but one of the challenges that often comes up is the weeding challenge. And this idea of having too many choices in the grocery store also can apply to libraries of any size. That image on the right is a shipment of new books that just arrived at a school library, which looks really exciting. But I encourage you all when you get a chance to listen to this talk. It’s like 18-20 minutes from Sheena Iyengar who has done quite a bit of study on this paradox of choice. And what she has found is that when people are presented with too many choices, they kind of freeze and they start to doubt their ability to make a good choice, and often just walk away and make no choice. And Iyengar’s studies were mostly around retail shopping. But there is a lot of evidence that this also applies in library settings. And in particular King County Library System, which is our local county system surrounding Seattle, they took this very seriously, and they did some of their own studies. And they came up with their collection diet. And their idea was: reduce the collection to five items per square foot. This might sound drastic, and given this is a large county library system with—I don’t know how many branches—a lot of branches. And so, if, you know, your mileage may vary, it’s going to be different in a small library. But the basic idea is to really look hard at your collection and reduce the size.

And what is an important kind of companion to this is to create as much face-out shelving as you can. And what King County, and I’ve seen this in other studies, what they find is that circulation actually increases, when you reduce instead of, you know, imagine that set of shelves with everything jammed in there ,spine out. How many fewer books are on there now, but how much more they circulate because they’re visible, they’re accessible, they’re inviting. It goes back to that first element of exposure. You’ve now exposed this. And I also I was really excited by the Chicago Public Library example of, at some point they’re like, hey, we can bring books into our media space and into our makerspace and I think you all have that opportunity. You kind of have to do everything in one room. But then thinking more intentionally, how can you relate displays to the kinds of activities in the learning, the making-learning context that you are hoping to create? And the thing with displays, they tend not to be static. You might want to change them out once a week, once a month, whatever your capacity allows, and that actually brings more of the collection into view and into people’s attention, so it can be really powerful.

So, we know it’s complicated for small libraries. We went through this with our smart space libraries, the small public libraries. And they had a number of questions and Brianna popped into chat. There’s seven answers to seven weeding questions. So, these were questions that were asked by small rural public libraries; may or may not apply to school libraries. But I really encourage you to take a look at that.

So, another thing that might get in the way, I’m not sure if any of you have this actually, I didn’t see it in your sketches. But I mean the classic immovable object in public libraries is the circulation desk. So, it’s not only a physical barrier. It’s a barrier to the invitation for people to come in and use the space. It’s that barrier to exposure expansiveness and control. It kind of says, like, we’re here and you have to pass through this before you can get any farther in the space. And immovable objects aren’t confined to circulation desks. It might be a couch, a large table that you have felt you need to, so, I’m not, I think maybe none of you have this challenge, but I also caution you to be aware. I have an example from one of our smart space libraries where they had successfully cleared their space and were excited, and then their local Heritage Society donated a large, and I mean large, display case to display the historical artifacts, which would have just dominated the space inflexibly. So, they very diplomatically found a better home for that display case. So just be aware of those large immovable objects.

And then this relates to the clearing space to clear your head. I loved all the drawings that you showed us on the first day of our convening. Brianna and I are big, big proponents of prototyping. So, taking that drawing, those sketches in two dimensions and making them three-dimensional. This is prototyping. It’s simple. It’s not high-tech. It involves cardboard, paper, colored markers. But what it does is it gets the idea out of the abstract two dimension into a more tangible three dimension, where you can physically move things around and we, when we did this with the smart space libraries, they realized, like, “Oh, the tables I thought I was going to get are actually too big for this space, or the tables fit but you can’t have enough circulation around the tables.” And then thinking also equitably, do you have room for a wheelchair to maneuver around? Is there a better way to arrange the shelves? So just I really, really encourage doing some prototyping and we’ll share in the learning community some information from the smart space group on what their prototypes looked like because it’s a whole variety, you can do it with Lego. There are no limits, except really encourage low tech, and just make it fun and have some freedom around it. Oh, I love it. And yeah, the virtual, the 360 virtual experience is a really interesting way, and one of our smart space libraries did that so that you can really kind of virtually move around in the space and see how things relate. That’s not low tech though.

And then so many libraries decorate with neutral colors: gray, beige. I just have a question about this: Why? Why. I don't know. But I find it a constraint on possible configuration.

And then this is a concern that often comes up. I know we talked about it with the Chicago Public Library folks and might be particular concern in your spaces because you’re kind of doing everything all in one. But like, oh the noise, the mess. I love Gina’s encouragement. Like that’s what it’s all about. Don’t try and shush the noise because that’s what generates creativity or it’s evidence that creativity and interest-driven exploration is happening. But I love this example from, this was a library that we worked with many years ago, kind of the first iteration of our Smart Spaces Project. A small library in Bellingham Washington where they were planning to, thinking about how they were going to do a smart space, but it happened to be holiday season, and they had had always had this annual holiday fair with Best Buy, where Best Buy comes in with various technologies and people get to test them out and ask questions. They had always done it in a basement meeting room. So, it would be sequestered from the main library and wouldn't disturb anyone. But that year it wasn’t possible, meeting rooms were not available. So, they just said, “Hey, well, it’s, this is a kind of prototyping. They prototyped what it would be like to have this kind of Connected Learning activity in the middle of the library. So, they did it. Not only did they have way more attendance than they had ever had any previous year, because other people would come by and like, “Oh, it’s happening here. Oh, I’m interested in this, too.” But Best Buy was just thrilled because they felt like they had more engagement with people than they had ever had before. So that inspired Bellingham library to put their new smart space right, and you’ll see it on the righthand image there, it’s right across from the circulation desk, very close to where you walk into the library. And they have had zero complaints about the noise and the mess. And in fact, what happens is people walk in and they see the activity, they’re motivated to join or they’re at least motivated to go ask questions and find out a little bit more about what the possibilities are for them as well.

So I want to focus more on spicing up a space and spicing up a space has a lot to do with color. But before we get into that, I want to just show some dramatic transformations that happened in some of our small space libraries or smart space small public libraries. And two examples that I think are just particularly inspiring: this was from Glenns Ferry Public Library in Idaho—a small very rural farming community. And the space before housed DVDs and VHS. So, they had a big challenge of weeding, you know, what did they not need? Did they really need VHS anymore? They do need DVDs because, in rural communities, many of the residents don’t have the connectivity to be able to do the streaming services that people are doing in big cities. And then they had to figure out where else can it live. So, they figured that out, they cleared the space, and with very much a focus on active Connected Learning in mind to really transform it, and this is where they ended up. I mean, I wouldn’t recognize the space, from one to the next. They did some reconfiguration. They had one, they had two doorways and they moved that to one central doorway, so the space wasn't so broken up. They took that shelving away from the windows, so they had natural light. They put in colorful tables, and I like the shelving unit at the, on the left photo. You can’t really see what’s in the bins, but they still feel very inviting because they can be color-coded. And it just feels like it’s an invitation to pull them out and explore what’s going on inside. Yes, and Brianna, yes, the shelving unit inspired the rest of the color palette. So, taking that as a real clue and inspiration.

And then the second example comes from Cornwall Public Library in New York. They realized as a focus of how they wanted to transform, that they needed a space for the teenagers. Believe it or not, that space on the left, that sort of funny-looking inverted book as a pillow, and that little tiny computer station desk next to it, that was the teen space for years in this library. And when they kind of connected with their teens and tried to find out why the teens don’t use the library, they realized because the teens don’t have a space that they feel they can be engaged with. So, then they started looking around. Well, where can we, where do we have room for a teen space? We already have so much going on in our library, and they looked over at the reference desk, which is opposite the circulation desk and just kind of around the corner from the entrance to the library. And they thought, you know, talk about Fort Circulation, they just thought, “Hey, let's think really fresh. Do we really need this?” And they decided, no. So, they went through the transformation and this space here with these happy, engaged-looking teens and that colorful mural, that’s where that reference desk was. And it was absolutely transformed, and the teens now feel like they own the space, even though the space is exposed. It is, as I said, right around the corner from the entrance to the whole library. They just feel like it’s theirs. They’ve been given control over how they want to use it, what kind of programs they want to have, and it’s just comfy and inviting, has great outlets for plugging in devices. So yes, and Brianna's plugging in a [link](https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/Topics/smart-spaces/cornwall-public-library-story.pdf)[[1]](#footnote-1). There are thirteen more transformation stories from small libraries that I find very inspiring. So, I encourage you to go look at them when you get a chance.

So, color, don’t be shy about using color. It is inviting, it’s engaging. In that photo on the left, they’re using color to define different spaces without the need to build walls. You can really use color that way to just sort of say, “Hey, this is one space, and this is another space.” An example on the right, when King County was redoing most of its branches, branch libraries, they got bold with color, with the furnishings, with the carpets. Carpets, though, we were cautioned by the KCLS folks to choose colors that are not going to show stains very readily because these spaces, because they’re inviting, they will get used. Murals are wonderful. That mural on the right is from that Cornwall Public Library teen space, and you might think, well, that looks really expensive, but they actually, in fact this whole space was created, designed and created by contributions, pro-bono contributions from community members, and that mural was painted by two teens in the community who wanted to kind of practice their mural skills. And they just came up with this and that enlivened the space so dramatically, I just love it.

On the left, there are a couple examples of very kind of simpler approaches to murals, like taking commercial stick-on lettering and creating a mural out of that. And I think in both of those, the mural is just a very, it’s an inspiring message that is part of the space and it’s part of what inspires people using the space to do interesting and creative things.

So, we’re now going back to the Lamb Weston Innovation Center in Eastern, Washington in Richland. And just because it’s not a library doesn’t mean you can’t get ideas from them. I just think these are such smart and simple graphics to just, one: make the usage of the space more clear. You know, if you’ve got some signage you need to convey, why not do it graphically; and also, just to add some pop to the space and make it look more fun and appealing and look like a place where fun things happen and creative things happen. And then also from the same space, those colors, that just makes me, on the upper right, it just makes you want to walk down that hallway. I just love it. And the lower left, that cloud. I don’t know if you call it a chandelier, the hanging lamp that is a cloud, it just gives such a different dimension. So, thinking about lighting in a space and how that can add to the atmosphere. Those cloud lamps I think are available commercially, but they’re a little pricey. So, one of our smart space library people said, “Hey, I think I can make that,” and so she did. And she made some cloud lamps for her library that look every bit as good as the commercial one. So, is there anyone here who is still worried about putting too much color in their space? I hope not.

So in our last little bit of time here on this topic, looking at this image, and this is a school library, what would you just want to change about this space, knowing what you’ve heard: about, you know, exposure, flexibility, control, expansiveness, all the blockers for reconfiguration... what would you change here? So well, really great, it just makes you just want to get your hands on the space and start rearranging. But actually the one thing that really caught my attention, if you look in the upper lower left court, or upper left corner, just in front of that section of forest green wall, it looks like there is a teen lying on the floor, and that just makes me think, like, this space is begging for some cozy, comfy, flexible space to just either crawl up and read alone or maybe have a group. I know a lot of our smart space libraries brought bean bag chairs into their spaces and those were really well received. So, and there a lot of variations, bean bags can take up a lot of space, but they’re a lot of variations on small, comfy, maybe colorful. But I just feel so sorry for that teen back there. She’s trying to make her space and there aren’t many options here. So, lots to think about. Any final comments before we move to the next break about what you might, one action you might take as you start thinking about your spaces? Oh, yeah, don’t put love seats in the teen area.

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

1. <https://www.webjunction.org/content/dam/WebJunction/Documents/webJunction/Topics/smart-spaces/cornwall-public-library-story.pdf> [↑](#footnote-ref-1)