

Intro: This is “*The Advancing Communities Show*” hosted by OHM Advisors. Each week, we bring you ideas, information and inspiration to make our world a better place through architecture, engineering, planning, innovation and collaboration.

In this episode, we're talking about teaching and school design practices for 21st century learners, and the recently released “*What's in Your Space: 5 Steps For Better School and Classroom Design*” authored by Mr. Mark White, School Leadership and Training Consultant; Mr. Dwight Carter, Principal of New Albany High School; and our own Gary Sebach, Design Director of OHM Advisors, who has graciously agreed to moderate this segment.

Before I turn this over to Gary, I want to share a little bit more about the book. It's published by Corwin Press and shares the lessons learned by our three authors on their journey to create a new kind of high school for students at Gahanna-Jefferson Public Schools, which is in suburban Columbus, Ohio. The primary case study for the book, the award-winning Clark Hall, is an alternative learning space for approximately 400 students of the Gahanna Lincoln High School.

Gary?

Gary Sebach (OHM Advisors): Yes, thank you. Mark, before we start, I would like for you to talk a little bit about your background so the listeners will understand where you come from. And I want to mention that Dwight [Carter] was scheduled to be here, but he couldn't make it. So we'll hopefully have a second podcast where we can have Dwight weigh in on some of this.

Mark White (Author, Educational Consultant): Okay. Well, I have been in schools for over 30 years as a teacher, high school principal and superintendent. At this time last year, I was helping to lead the Beijing National Day School, one of the great schools in China, and came back to America and work for a company that worked with Fortune 500 firms on understanding digital trends. Now, I'm working with several schools and still writing, speaking and consulting. We learned a lot about Clark Hall and it's all coming together through the book and through the next steps of my career.

Gary: Good. Okay. Well, let's jump right in for the audience. I want to make sure the audience understands what we mean when we talk about 21st century education. We talk about it so much, it's natural to us. But in your own words, how would you define 21st century education?

Mark: I think it's looking at education through a 21st century lens, which means that we're in a world now that is rapidly transforming, and we are preparing our students to go into a workplace where many of the jobs don't exist. And so, some of our educators might know this, some of our people in society might know this. But in our schools, we're having to walk a line between standardized testing and the essential need for global skills.

21st century education is really having the foundation that you need in the testing, but you must go so much further. You must have the global skills of the four Cs: communication, collaboration, critical thinking and creativity. People in the future who can apply information will be the ones who will be successful.

Gary: Good. And sometimes, you'll hear the term "student-centered learning" which is really the same principles. We understand that students learn in a variety of ways, and we're trying to create education that puts the teacher in a position to relate to the kids and the kids to relate to each other.

Mark: Oh, definitely. Yeah, especially with this generation. In the book, we talk so much about Generation Z – these students who were born in the year 2000 or so – and have grown up with touchpads and they're online, they're swiping. They want to be at the center of what is going on because they're at the center of learning in their own worlds. And they walk into our schools, and sometimes, our schools are still putting them in straight rows. Everybody is still moving at the same pace, studying the same curriculum.

These students need choices. They need to be online. They need to have some input and how they learn, what they learn, how they're assessed, the timeline that they have. So it really is turning much of the education over to the student.

Gary: Yeah. And that's really that paradigm shift of where we're seeing the teacher more as kind of managing the discussions, not the sage on the stage. They're really participating.

Mark: The teacher has to be the facilitator of learning, not the presenter of information all the time, because information is coming at us so quickly. As we point out in the book, information in the world is now doubling every 12 to 13 months. An IBM Big Data study predicts that in the near future, it will be doubling every 12 to 13 hours. The essential question that we have for educators in this century is, "What does it mean to be educated in the 21st century?"

Gary: Yeah. Good.

I think what we'll do today, and I'll try to keep it brief, is to look back in terms of what happened at Gahanna School District that led to Clark Hall. I mean some of the decisions that were made and discussions that were happening...Was it internal? Was it top-down? Why don't you talk a little bit about what led to doing Clark Hall? And then, I'll talk about what worked and what didn't work. You know, we talk about how we encourage students to fail, right? For this generation, more than ever before, it's okay to fail because we learn from it and we move on. So, what did we do at Clark Hall that we should do differently? Do we know yet? Is it too early to tell? And then lastly, how has that changed what you're doing? And I'll talk a little bit about how it's changed the way I approach designing for education.

So, let's begin by talking about how the district decided fairly early on that they needed more space, and I'll let you take it from there.

Mark: We were overcrowded. We had about 2,200 students in the space designed for 1,800. And we had an opportunity to buy some property right next to the high school across the street. And so, the first impulse is always, "Okay. We build a building over there and build it the way we know it. We just put in more classrooms, more lockers, just build everything as we've done in the past, another edition."

But we stepped back and we said, "But what we know about students today, the way they learn, the plasticity of the brain, the way it can be reshaped, where we're going with the global skills, let's step back and see, do we really need to replicate what's been done in the past? Let's

not just build a new wing. Let's build a new type of building built around how students learn, global skills, and their technology usage. We wanted technology be the foundation of their learning here.”

Gary: In the 21st century, there's been a lot of talk about change in education. But I feel, personally, that it's only been in the last 10 years that it's starting to get momentum, in Ohio especially, and I think Clark Hall was on the leading edge of that. I'm sure that there were people starting to understand that in your district.

Mark: They were, but it was very scary to build it because there was no Clark Hall out there yet. We couldn't find really any examples, especially what we wanted to do – turning the curriculum over to students, the global skills, and the space. It was scary but it all worked. I think one of the first things we have to get people to say is we have to be risk-takers. You're not going to break out of the mold without taking risks. There's no easy way out of the mold, that's why you're in the mold.

Gary: I remember fondly, by the way, some of our discussions and the way that we were approaching the design. We would be working on the floor plan, the design of the rooms while you guys were still trying to figure out, “Well, how are we going to use it?” And so, we were trying to catch up with you at the same time you were still trying to figure it out on your own. We had a lot of input from teachers and students. And to me, one of the things that came out (of the design process) that was really important was this idea of adaptability and flexibility. But talk about how you were developing the curriculum and how were you training your teachers? And what are the things that you were doing from an education side?

Mark: Dwight did a lot of great work. I was the superintendent at the time. Dwight was the high school principal. He did a lot of great work with the staff on getting them to understand that the students can be trusted. Turn it over to them, ask for their opinion. You mentioned that they had input on the building. The students, as you remember, were choosing the colors, they were choosing the furniture, the carpet squares and the name. It was their building and the staff's building. It was not just presented to them. They had buy-in. But we had to get our

teachers to understand that the students, they are different. Besides what we kept talking about, we also brought in some great speakers like Ian Jukes, who's internationally known for his understanding of today's student and technology.

We had Tom Guskey come in, who's an internationally known expert on assessment, because learning assessment is going to vary from student to student, as he stressed. So we had a multi-front approach to what we wanted to do, talking with our students, and bringing in outside experts. It was a very challenging, fun process. It was successful in that we found that students could be successful in building like this.

Gary: In the book, you talked a lot about, and you mentioned it earlier, the idea of Z space and how it's about a mindset. We've talked about this recently... this idea of culture or mindset for the Z Generation, but put it in your own words...

Mark: Well, I think that Generation Z, today's students, if you ask them to come in, they will sit in straight rows and they would take our test, and they would do what we asked them to do, but they're going to be so much better off if we turned to them and say, "These are the standards you have to have. This is what the information you have to have. How can you learn it? And let's talk about how you can create something."

Today's students, they are used to creating. They create their music. They create videos. They create their YouTube channels. They want to create information and present it to us, and that's the key in 21st century education. Involve the students in their assessment.

Gary: Good. What we talked about was the skills, the idea of communication, collaboration, critical thinking, and creativity, when we designed the space, you guys were thinking about how you design education to support that. Now, how do we design a space? How do we design a building that supports that? We used whiteboards. We've encouraged students, so we called it extended learning. Outside of the classroom, we wanted students to move out and communicate and collaborate. We want them to present ideas. We want them to receive ideas.

The whole idea was this idea of flexibility and extending beyond the classroom. We used a lot of glass. We called it connected classroom. Not just technology, but we wanted that transparency and that connection outside. We wanted that freedom. And so many times, we take people through Clark Hall and they say, “This is really cool, but we could never do this. We can't trust our students.” So again, we're back to that idea of culture and trust.

Mark: It begins with trust. I think students of almost any age, if you just give them some trust, and say you believe in them, give them some slack, they're going to come through people want to do the right thing. So many times in schools, and I think in all of culture, we had built our rules around the people who do the wrong things.

In schools today, you have to say, “We don't necessarily need all the classrooms to look the same, to be the same size, have all the desks the same, lined up in straight rows, have multiple uses of space for students and trust them.” Now, of course, older kids you can trust more than younger kids it's because they're kids. But trust them to walk down the hall with a laptop, with their assignment, logging on and doing the right thing, and they'll come back and they're submitting it online. It works.

Gary: So, in the book again, you pointed out some good things in terms of challenging yourselves or the districts challenging themselves to push the boundaries. So, obviously, we push the boundaries of space in how we deliver education and how we interact with students. So, are there other boundaries that they should consider that they should be doing differently?

Mark: I think it's how you view students. One of the hardest things is adjusting the curriculum. Teachers have to let go and not be holding onto every part of the teaching. For example, a student can come into a classroom. The assignment can be online. The student can log on, see what the assignment is from the teacher posting on Blackboard or some other platform.

And then, the student can check in with the teachers, stay in that classroom sitting in a rocking chair, sitting in a soft chair, sitting on the carpet square, on the floor lying down, sitting on the exercise ball or go next door to a small room with a group, a room designed just for small groups of students to meet, go out in the hallway. We turn hallways into a learning space.

Students have always been sitting in the hallways in high school instead of sitting on the floor, we said, "Let's give them some furniture and some natural lighting."

They might be going down to a huge space in working. They might be finding a little cubbyhole some place where we design furniture for them. So, it's a matter of letting go, letting the students go, have mastery of the curriculum, coming back, and turning it back in.

Gary: I wish Dwight was here. My favorite story is the one teacher who said she didn't feel the student was engaged in the lesson plan and she said, "Where are you on your story or your paper?" And he pulled it up and said, "Well, what I found is that I work on that at home, in a different environment, when I'm here I'm better off to do..." I don't remember what 'it' was, science or something. But the story hit me in terms of, we gave the student the choice and the flexibility. He's an educational environment, he can get help if he needs it, but he can also do the work that suits him in the time that he wants to do it.

Mark: Right. And we found that all kinds of students respond well. Your brightest students, of course, they love the creativity. They love the idea of being able to go deeper into the subject. The average student still likes it, too, it has a lot of fun, and even the at-risk student. I taught...the first year it opened, my team taught a high school English class in the Clark Hall. And one of my students who was at risk he told me at the end of the year, he said, "I love this building. I see myself as a little Clark Hall, and that this building is built for creativity and fun, and that's who I want to be." Those were very powerful words to hear from that at-risk student.

Gary: Yeah. I don't think I've heard that story.

Mark: It's a great one, yeah.

Gary: So, technology. I want to talk a little bit about the role of technology. Because I know we struggle with are we going to put it in? What is it going to be?

Mark: Well, I think the first thing I stress to educators is technology pricing is dropping. It's going to continue to drop and it's becoming more affordable every year. So we can get the devices into the hands of the students. I think one of the biggest challenges is the actual infrastructure for the technology, the network. Is it strong enough to handle all the computers?

Too many times, districts will go out and buy devices and they can't get logged on because the bandwidth is not strong enough, that's not designed for something like that. We took the track that the infrastructure was going to be...the network was going to be the foundation of student learning for the 21st century.

We partner with Cisco, Dell, and Intel. They saw what we were doing. They drew down their pricing, made it affordable for us. And by the way, this is all being done through some of the toughest budget cuts in our school's history because of the budget process that we use in Ohio. We kept the vision alive and kept going. And so, it was critical that the devices and the network never went down. The devices are good and they always work.

So, that's key because these students are coming in swiping in, texting and using technology in their everyday lives. They power down when they come into school and so we said, "We cannot have that anymore." We built a very strong team of technicians to keep everything running and built a very strong network. Cisco said at that time, that it was the strongest system they had ever put in any school district anywhere. They drew the pricing down because they believe in what we were doing in this building. It's critical.

Gary: And it continues. We see it continuing down that path. And as educators, there's so much information, you talked about it, we've got to give them access to it. Now we got to teach them how to know when it's good information and bad information.

Mark: Exactly. Yes, that is critical too. Where do you go for information that's reliable? We say the future is going to be for those who can apply information. They have to have the right information to apply. And that's a key point, good point.

Gary: Yeah. Good. So, one of my favorite stories when we talk about technology is, and I don't remember the teacher but she said, "Oh, I check my phone." And she was double blocked and I think they were team teaching and she said, "I realize I want to check my phone." So I tell the students, "Put your phones away and we'll check the phones halfway through the block."

And then we were given a tour and we went down the hall. An older teacher said, "I don't allow phones, so I collect their phones when they come in." I use that story because I want teachers to understand that they also have some flexibility in how they want to address the students in their classroom. And I don't know what your thoughts are on that, because teachers are comfortable in different ways.

Mark: I think we have to go where the students are. We can't just have the phones going off all the time in the classrooms. But I think in most schools now, in many schools, they are becoming more flexible. And even in those schools where they might have really hard rules about cell phones, if they say no cell phones or keep your cell phones off, well, the students still bring their cell phones, and they're still going to have their cell phones on. Hopefully, they remember to turn it down and mute it before they walked in.

This is where they are. We were one of the first districts for our high school students to open up Facebook, YouTube and Twitter because we saw them as educational tools. They could go onto YouTube and use a lot of information. Our teachers were using Twitter to communicate with students and they were using Facebook to communicate. So we said, "Let's open up for our high school kids." And so many times, districts don't trust their students enough to open up and let their students use these platforms.

Gary: So, I said I wanted to talk about what worked well and what didn't work well. And maybe one way to put it is, there is an unintended consequence to using these platforms. I know what one of Dwight's answers would be if he was here, so I'm going to take the easy one. And that is, when we built Clark Hall, the rest of the high school, the rest of the teachers in the population said, "Well, why can't I have that? How do we create something equal for them, that culture that we're talking about?" And I know that one of his struggles was how to give that to the rest of the high school. What didn't work well and what would you do differently?

Mark: I would have stressed this going back. We stress now that yes, if you're building a new building, it's a great opportunity to start over from the beginning. But many times you can't. You're in an old building. Well, you don't have to change the entire building. We tell people, "Start small." If you're in an older building, do one corner, do one classroom, do one wing, do one hallway. Just start doing something. You'll see that it will work.

That might be a sofa. It might be a loveseat, a carpet, some carpet squares. Do something. Something else that we found is, when we built Clark Hall, most of our rooms were very creative with the furniture, the soft furniture, carpet squares. Some were more traditional. And we had a lot of natural lighting, but we had more of the traditional colors, traditional furniture. And our students and teachers quickly found, they wanted the more fun, the eclectic, the soft furniture.

And so, if I could do it all again, I would probably make the entire building like that. Most of it was, but we still kept a few traditional classrooms. I wouldn't do that again. And I would keep stressing, even if you can't build this entire building, do something in what you have. You control your space, do something with it.

Gary: That's one of the things that, as an architect, we struggle with. There's a lot of state standards or templates in terms of the size of the classroom and this number of students, and we're kind of held to that where I want to give them those smaller classrooms. I want to give them that extended learning areas. We want to create that flexibility so it's not a traditional classroom. But we're held to a certain expectation.

You've heard me talk about, I think we need to give our teachers more room because we wouldn't ask a corporate office worker to go to work and work on a small desk or a small area. So we want to give the teachers and the students the room they need to do what we're asking them to do. And that's hard to do under standard state template type stuff where they say, "Well, get this many square feet and you get this size desk."

Mark: Sometimes states are behind in what they're asking of our students and our architects and our teachers. I remember, we went to the State of Ohio and they were pretty flexible with us. They called us, "That building." We'd go meet with them and they say, "Oh yeah, you're

from that building, right?” Because they were funding us by the square footage, and what they could agree to was educational space.

And so we were pointing out that some of these small rooms, they were educational space for either small groups of students or possibly even small classrooms. And so, they were as flexible as they could be but took a lot of persuasion. I would say anyone in that situation, gather your data, gather your resources, and try to educate the people who are making those funding decisions.

Let them know this is a new type of building, but this is where we are going in education. It's only a matter of time before all the kids are on technology. We're building more buildings like this or we're going to be out of business. That's the way it has to be. Are we still going to be educating people like this 10, 20, 30, 40 years from now? We can't be.

Gary: And that brings me to a great point when we designed Clark Hall. This idea of doing drywall walls and lots of glass, and we know education is changing at a speed that we've never seen it. And I think technology is helping to enable that speed in which we are changing the way we educate. So, we have to do complete flexibility and we have to realize that it's going to be different. It's not whether I got it right or wrong. In some cases, it's just going to change. It's going to adapt and we have to be able to do that quickly. Are you seeing...even since Clark Hall, are you seeing anything change drastically or are you seeing a slight change?

Mark: I would say, if anything, the change in the students could be accelerating. And we could be accelerating in the technology that's coming onto the market. I mentioned a while ago about knowledge doubling and processing speeds continue to be very, very fast and getting faster. It's only a matter of time before what we think of as science fiction or magic is happening now, and that was what's happening in the future. And that's what was told to me by someone at Dell, a very high designer at Dell. He said, “What we think of as magic now will be happening in 20 to 30 years.”

So, as we move our schools forward into 20 or 30 years, what would those schools look like? And I was asking a high school the other day, “Will students still be in this building? What's this building going to be? How's it going to be functioning? How many students will be here? How much will be online? What will be the role of teachers?” And those are questions we have to

ask now to get ready for where we're going, to get to that point in 20 or 30 years. It doesn't happen overnight. You have to transform with your students and your student body.

Gary: So, I guess the last thing I want to talk about is, and we've kind of touched on it, but what has been the effect of having lived through the process of Clark Hall? And if I haven't said it, thank you for letting me be part of that journey because it was amazing time for us. How has it changed you in terms of what you're doing, what you're saying? Was that a pivot point in your career?

Mark: Oh, definitely. I can even quote some of the teachers and they say, "Once you teach in a place like Clark Hall, it's very hard to go back. Once you see what the students can do and once you teach in this method, you don't want to go back. Because as you see, that's where we're going and it works." Yeah, and I want to thank you. It's great working with Bird Houk at that time and OHM.

We were a great team. It takes teams of educators and designers, architects to make all of this happen because no one has all these answers anymore. No principal or superintendent can walk in and design a building anymore. And say, "Well, I want a cafeteria a certain way or auditorium a certain way." It's all so flexible now. It has to be flexible and it takes lots of ideas.

Gary: And it's not a one-size-fits-all.

Mark: No.

Gary: And I think, again, I'll go back to that idea of adaptability and flexibility, because it's not always going to be the same principal, the same teacher, the same superintendent. So, those schools need to be able to be flexible to change as things change.

Mark: And one thing I love, too, is we have so many different sized rooms that can be used for so many different purposes for now or in the future. And even if you look down the hallway, there are some tiles, ceiling tiles to the top that kind of angle over to the side. And I always point out it's sort of a metaphor for learning, and that this is an irregular building because learning is irregular. Not everybody can learn the same way. And so, this building allows people with this type of teaching to go out and learn at the speed that they want to in the way they want to.

Gary: Well, I can tell you, it's changed the way I approach educational design. And so, we're fortunate to continue to take what we learned at Clark Hall and apply that to other building types. What we're finding is on the middle school level, even on the elementary level that we're applying a lot of the same principles. At the high school, it's a little bit different, but I don't know how you feel about those other grade levels.

Mark: Oh, I think it's the same thing. They've been doing some of these things just naturally through their teaching and learning for years with things like centers and fun furniture in elementary schools. It tends to go down in the middle schools and down even worse in the high school. You find studies that say, every year of schooling, students despise it more. And there's a reason for that. It's how they're treated. They're not turned loose. How can they lose that creativity, that sense of awe as a kid? We have to keep that going.

It kills me sometimes to go through some of the suburbs and see an \$80 to \$120 million high school being built. It's a huge, beautiful building, but it's being built with the same ideas that were being used in the 1970s. And I have to ask, will that building still be used in 30 to 40 years when it's still being paid off?

Gary: Right. And one thing I can tell you is that we didn't design that [type of] school because we are true believers in designing schools not just for today, but for the future. And we don't know what the future is so it's going to be lots of flexibility.

Mark: Exactly, flexibility. I call it just the key components of the human heart in terms of the colors, the furniture, the lighting, the technology. Those about the only givens you have anymore, that technology is going to keep changing somewhat. The standards will change, but those other elements are going to be there, and that should be the core of education. It shouldn't be what is learned for a state test today or a national test. It should be what skills do you need moving forward into the future.

Gary: Yeah. You and I talked briefly before we started about what we do on the corporate side in terms of creating this sense of culture. And I really mean culture is so important to any business, any entity, and understanding that we've got to create that same innovative culture for education. And I think that colors, furniture, natural daylight and connectivity, create the idea that this is somewhere fun, where students want to be.

Mark: And superintendents and principals and teachers have to let go. We have this saying from *Field of Dreams*, "If you build it, they will come." Well, if you build a new type of building, it doesn't necessarily mean they're going to change their teaching and learning. You can build a beautiful, creative space and go in and still use the same tests, the same assignments, and just make the computer the new pencil where you don't turn kids loose. And so, we stress that it has to be, again, built around what the student can do.

Gary: Well, it was such a pleasure to work on the project with you. And the book is a result of your passion and really collectively all of our passions for getting out there and telling people what we did and why it was so important. We can get the book at Corwin Books or we can get it at Amazon. And if you want to contact Mark...

Mark: My Twitter handle is @MarkWhite55 and I'm also on LinkedIn.

Gary: And to find out more information about OHM, you can go to our website at ohm-advisors.com. You can follow me on LinkedIn at Gary Sebach, and I'm also on Twitter @GSebach. That's @-G-S-E-B-A-C-H. Thank you.

ARCHITECTS. ENGINEERS. PLANNERS.



Mark: Thank you.

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