Welcome back to the Novel Librarian with Tara Hargrove. In today's episode we'll be talking about Makerspace and STEAM and what they have to do with the library…

Traditionally libraries are meant for reading and research. They contain rows upon rows of books, both fictional and nonfiction. When outsiders think of a library, they think QUIET, BLAND, STRICT, and sometimes UNINVITING. But being in the 21st century, so many things have been thrown out the window when it comes to school libraries. For years the word differentiation has been thrown at classroom teachers from all directions. We all know students, and everyone in general, tend to have different ways they grasp content that is to be learned. Some understand better when they hear what is being taught, while others are more visual and need to see images and videos along with the new concept. Then there are those who are hands on learners and understand better when able to manipulate with their hands. Librarians are collaborators, doers, experts at finding the best ways for students to learn in order to become future ready citizens. This is why makerspace has fit so brilliantly into the library learning commons and has changed the way the worlds sees what a library is for.

The same still holds true as it did many years ago when the first free modern public library opened in 1833, libraries provide information literacy. The difference seen in libraries today though is that this information literacy is brought to light in a different way, one that can help reach all learners, no matter what age, race or gender.

If you try to pin down a single definition for makerspace, it will not happen. Makerspace has a bit of a different meaning to everyone who uses them, but one thing they do all have in common is that they are collaborative, hands on learning where students figure things out by purposeful "play." Think about a kindergarten classroom. Most contain areas for free centers. Those centers could include a playhouse and kitchen with all the play toys one would need to pretend to cook with. Another might have playdoh in it where the students try to recreate a picture. Then there are building blocks where students, even at 5, can build buildings, forts, castles and whatever else their minds come up with. This is purposeful play and good for their growing brains. But why stop at kindergarten? Studies has shown that even having makerspaces at the high school and college level has benefited students. According to research by Ludwig, Nagel, and Lewis, makerspaces are critical and related to the health profession field and its undergrad students. They took several undergrad, premed students and put them into makerspace groups, allowing them "to create tangible solutions to health-related problems"(2017) and they discovered that what the students learned and figured out is critical to their future in the medical field.

So, we all seem to UNDERSTAND makerspace, but why in the library? And why STEAM instead of STEM. To answer the first…two things come to mind…why NOT the library? And let's face it, there already aren't enough hours in the day for teachers to cover all their objectives and skills and although makerspace can take the place of traditional learning in the classroom, it can downright stress teachers out to completely flip what they are so use to doing. So easing them into helps. Lots of teachers do have STEM or STEAM areas within their classroom, but on a smaller level. When a makerspace is put in its own area of the library, it tends to be community

centered and can be on a larger scale. AND it can be an extension of what they students are learning in their classroom. This makes not only for the perfect place for students to collaborate and learn, but for the teachers and librarian to do the same.

And why STEAM vs STEM? According to a study published in *Journal for Learning through the Arts*, a tug of war began years ago between STEM which is the integration of science, technology, engineering and math and STEAM which adds the element of ART (2016, p.14). However, their results show that the "proponents of STEAM…clearly plays a role" (2016, p.14) in younger students understanding science better. With only nine total hours of exposure to STEAM learning, students showed a growth of 50th to the 63rd percentile on their standardized science test. This is huge! It seems art is like math, necessary in more than one area of learning. It's like it's cross-curricular in a way.

So, as you can see, makerspace and STEAM are both necessary components in the education of our students who will one day be the future behind our workforce.

References:

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