Genius Hour – ISTE 2014

Saskatchewan School Library Association

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How can you employ Genius Hour, 20% time projects or passion-driven learning to spark creativity and excellence in education? This question was discussed by a panel of experts at an ISTE 2014 session, Vicki Davis, Erin Klein, Karen Lirenman, Angela Maiers, Sylvia Martinez, and Don Wettrick.

Whether it is called Genius Hour, 20% time, or the Passion Driven Classroom, it is the consistent allocation of class time for students to pursue personal interests. The classroom becomes a transformative environment in which students create, experiment, and engineer. The purposeful use of technology is emphasized, but more importantly students are encouraged to pursue their own talents and interests. Genius Hour "allows them to reach beyond the routine, unlearn the rules they've been programmed to follow and embrace the uncertainty of their own audacious dreams" (Genius Hour).

The concept of Genius Hour was influenced from the business sector and Daniel Pink's book Drive. Innovative businesses invite employees to think creatively and contribute their own ideas to the organization. Google is infamous for the allocation for providing its employees one day a week to work on self-chosen project which would promote the company. The process produced Gmail, Google News and several other important Google products. Daniel Pink ponders the question as to what drives us. He believes the future of our students will require collaboration and communicative skills where they will be asked to "create the next tool, not to push bureaucratic paper" (20 Time in Education).

The same Genius Hour principles apply in the classroom as in the corporate environment. Students are provided a set amount of time to engage in an open inquiry initiated by passion or personal interest. Students design or select a question which they would like to explore. The inquiry demands questioning, critical thinking, ownership, reflection, and responsibility for determining the purpose of the investigation (Zion & Mendelovici, 2012). Students spend considerable invested time researching their interest before creating a product to be shared with a larger audience. Throughout the process, the teacher facilitates the student projects to ensure milestones are met, provide guidance, and encourage collaboration with experts beyond the classroom walls. Examples of Genius Hour projects can be found at ETEC510: Design Wiki. The Genius Hour web site outlines strategies to facilitate, promote and assess projects.

Angela Maiers states "You are a GENIUS, and the world expects your contribution." Her book, coauthored by Amy Sandoval, *The Passion-Driven Classroom: A Framework for Teaching & Learning* details ways to cultivate a thriving and passionate community of learners. Maiers has taken the concept of Genius Hour a step further to develop Choose2Matter. It begins with a question that helps students explore their passions: "What matters most to you, and why?" The question then evolves further, by asking: "What breaks your heart about that?" and "What are we going to do about it?" Students have moved beyond learning, to take action that has an impact on the world.

Sylvia Martinez states "There's a technological and creative revolution underway. Amazing new tools, materials and skills turn us all into makers. Using technology to make, repair or customize the things we need brings engineering, design and computer science to the masses. Fortunately for educators, this maker movement overlaps with the natural inclinations of children and the power of learning by doing. The active learner is at the center of the learning process, amplifying the best traditions of progressive education". Martinez, with Gary Stager, authored *Invent to Learn: Making, Tinkering, and Engineering in The Classroom*, which has heavily influenced Maker Space - a growing effort to reinvent creativity by letting students create, design and build solutions to problems they see around them.

In the SSLA webinar, Martinez stated "It's as simple as giving students a real-world problem and then inviting flexibility and student agency into the classroom". Maker Space and Genius Hour are about allowing students' passions to be acknowledged and explored. Teachers are asking their students to act like practitioners who are not confined by artificial divisions of subject areas. To hear the archived webinar and participate in upcoming events, please visit SSLA's Learning Events. Each learning event introduces strategies and innovative practices to help teacher-librarians improve learning environments and capture value from new and existing technologies.

Maker Space emphasizes the use of technology, but its power is not the use of a specific set of tools but from embracing a constructivist approach to learning. Tools and materials like robots, 3D printing, e-textiles, programming, physical computing, and Raspberry Pi are being integrated into Maker Space to enable the design of technology manufactured works. Students now have the opportunity to have inventions printed, programmed or imbued with interactivity. There are many design programs online like Blokify, SketchUp, and Tinkercad, not to mention online repositories for design templates. Martinez recommends MaKey MaKey for a teacher starting Maker Spaces. It is a simple small board that allows a user to connect the computer to any object that can conduct even a little electricity. It uses alligator clips and a USB plug-in and has no other software needs. Coding sites and apps, such Daisy The Dinosaur, Hopscotch, Scratch, Tynker and CodeAcademy, helps students earning computer programming and develops problem-solving and critical-thinking skills. Creative apps, such as GarageBand, DIY.org, Rube Works, invite students expand a student's toolbox with new ways to make things and new things to make.

Learn more by joining SSLA's Digital Fluency Badges. Digital Literacy Badges provides a professional learning opportunity in which participants earn digital badges through learning about technology tools and applications, and then apply the learnings purposefully to teaching practices in order to deepen student understanding of learning outcomes. Digital badges offer participants the opportunity to pave their personal learning pathways and leverage the potential for mastering digital age skills embodied in the ISTE Standards and Saskatchewan's Technology in Education Framework.

Maker Space projects also involve the availability of inexpensive disposable supplies. Cardboard, conductive materials, copper tape, foil, conductive ink, fabric and graphite pencils are invaluable supplies. The learning experiences are embedded with direct experience with materials. Invent to Learn is a great web site for materials and ideas.

The provision of materials need not be expensive, but rather provide opportunities for students to work independently on in-depth projects in order to create learning environments driven by creativity and passion.

Let's unleash the power of students to create. Let's get excited about hands-on learning and students demonstrating the incredible things they invent, build and share.