

## 16 Tools to Promote Inventiveness in the Classroom

Posted on 07/30/2018



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Invention is the creation of a product or the introduction of a process for the first time, while innovation occurs if someone improves on an existing product or process. The link between those two, educational technologist Kathy Schrock says, is inventiveness—the ability to brainstorm, to be flexible, to elaborate, and to see original ideas come to fruition. Inventiveness—the bridge between inventions and innovations—gives students license to use their creative imagination. And today’s classrooms need more of it.

A few questions can pinpoint whether a classroom is conducive to creativity and inventiveness:

The classroom’s physical environment offers flexible resources

The classroom’s learning climate has students actively participating in discussions, allows for collaboration, and values different points of view

Students are engaged, seek different viewpoints, take risks, reflect on learning, and have time to think creatively and develop ideas

“Something might need to be done in the classroom to help students,” Schrock says. Educators might consider “giving students freedom to create assessments and allowing varying formats, setting aside creativity time, using technology to broaden assignments, or using unconventional learning methods such as having students create a TED Talk to review a chapter in a textbook.” Approaches like these encourage students to use empathy, collaboration, and creative imagination skills, she adds.

For instance, teachers could:

- Tell students stories about situations that accidentally led to new products such as the Slinky or the Post-It Note. Talking about interesting failures or epic fails, such as Bic for Her pens, can get students engaged and talking about all kinds of ideas.
- Ask students to write headlines for a news article focusing on inventions in the year 2050 and see what they can imagine.
- Pick a well-known object or tool and ask students how they might improve it or change it for the better.

Among Schrock’s many resources is [this Tallyfy guide](#) <sup>↗</sup> to design thinking, which helps students think about innovation as it relates to helping different consumer audiences with real-world problems. Educators can use it to guide students through the design thinking process. The six steps in the process focus on understanding, exploring, and materializing: Empathize, define, ideate, prototype, test, and implement. Schrock suggested adding a seventh step for reflection.

There are many strategies and tools aligned to those seven steps that educators can use to encourage inventiveness and design thinking in schools. During ISTE 2018, Schrock presented a variety of tools and strategies to help boost inventiveness in the classroom. To access Schrock’s extensive inventiveness resources, including the 16 listed [below](#) <sup>↗</sup>.

- **Empathize** (including polling tools, social media, and experts):  
1. Poll Everywhere, and 2. Google Forms
- **Define**:  
vv 3. Wufoo, and 4. Airtable
- **Ideate** (including mapping tools, real-time collaboration tools, and curation tools):  
5. Popplet, 6. Stormboard, and 7. Feedly
- **Prototype**:  
8. Padlet, 9. Animation Desk, and 10. Google Slides
- **Test**:  
11. Twitter, and 12. Polling tools
- **Implement**:  
13. Adobe Spark tools, and 14. Weebly
- **Reflect**:  
15. Blogger, and 16. Evernote

Source: <https://www.eschoolnews.com/2018/07/09/16-tools-to-promote-inventiveness-in-the-classroom/?all> <sup>↗</sup>