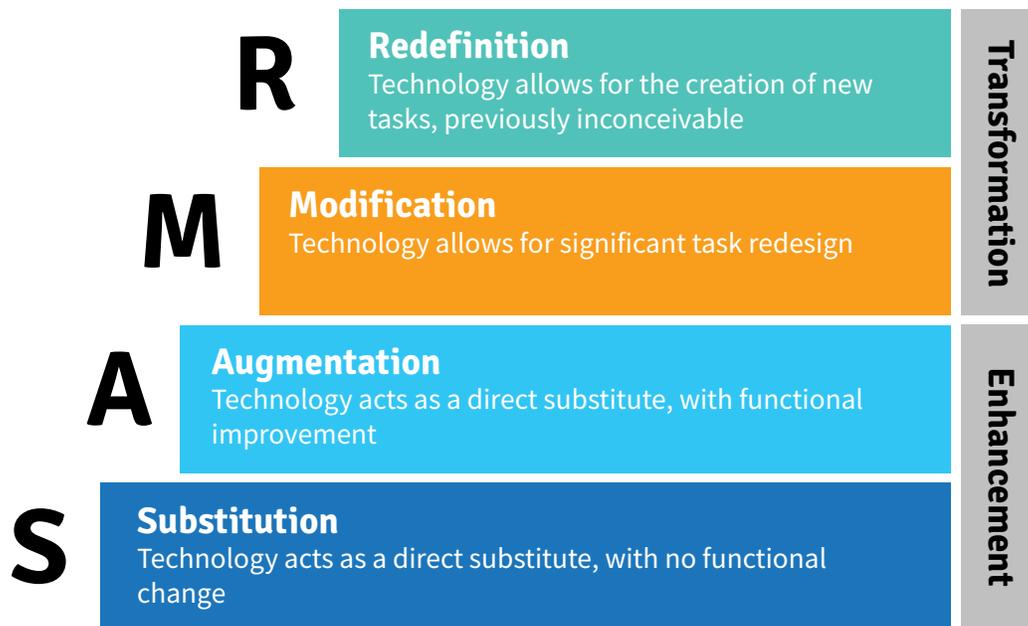# A Beginner's Guide to SAMR Model

What is the SAMR model?

The SAMR Model is a framework created by Dr. Ruben Puentedura that categorizes four different degrees of classroom technology integration. The letters "SAMR" stand for Substitution, Augmentation, Modification, and Redefinition. The SAMR model was created to share a common language across disciplines as teachers strive to help students visualize complex concepts.

R **Redefinition**
Technology allows for the creation of new tasks, previously inconceivable

M **Modification**
Technology allows for significant task redesign

Transformation

A **Augmentation**
Technology acts as a direct substitute, with functional improvement

S **Substitution**
Technology acts as a direct substitute, with no functional change

Enhancement

While it's often visualized as a ladder or staircase as above, this can be misleading because Substitution (the bottom of the ladder) is sometimes the best choice for a particular lesson. This is why it's better to think of the SAMR model more as a spectrum. On one end technology is used as a one-to-one replacement for traditional tools, and on the other end technology enables experiences that were previously impossible without it.

Regardless of how you visualize it, the SAMR framework can be a simple and effective way to assess how you are incorporating technology into your instruction.

The SAMR model is made up of four steps—Substitution, Augmentation, Modification, and Redefinition. Substitution and Augmentation are considered "Enhancement" steps, while Modification and Redefinition are termed "Transformation" steps.

Think of the difference between seasoning an old family recipe (Enhancement) and creating an entirely new, original dish (Transformation). Susan Oxnevad referred to this movement across the spectrum as "teaching above the line."

At this stage, technology is directly substituted for a more traditional one. It is a simple, bare-bones, direct replacement. For example, if you are teaching a government lesson on the Constitution, you might use an electronic or web-based version of the document instead of a hard copy. Students might also answer questions about the Constitution using a Microsoft Word instead of filling out a worksheet.

Substitution might also include a student using Keynote, PowerPoint, Prezi, Slides, or a similar program to present information about an article or amendment to the class.

In this step, you ask yourself what we stand to gain by replacing traditional tools with technology. Invariably, some situations will be better served with pen and paper.

The technology is again directly substituted for a traditional one, but with significant enhancements to the student experience. In other words, you ask yourself if the technology increases or augments a student's productivity and potential in some way.

Returning to the Constitution example, a student might augment a presentation on, say, the 14th Amendment with a video clip of how equal protection under the law was enforced during school desegregation. It could also include interactive links to relevant supreme court decisions, such as Plessy v. Ferguson or Brown v. Topeka Board of Education.

In this stage, you are beginning to move from enhancement to transformation on the model. Instead of replacement or enhancement, this is an actual change to the design of the lesson and its learning outcome. The key question here—does the technology significantly alter the task?

A student presenting research on the 14th Amendment, to continue our example, might create his or her own unique graphic organizer for the class that not only includes the usual multimedia resources but represents a new product or synthesis of existing material. As another example, a group of students might collaborate in a cloud-based workspace to propose a modern definition of equal protection under the law and solicit feedback on their proposals from classmates.

You ask yourself if the technology tools allow educators to redefine a traditional task in a way that would not be possible without the tech, creating a novel experience.

For example, after completing their group work and soliciting feedback from classmates (both tasks that could be completed "offline" although arguably not with the same experience as in the modified format), students could utilize technology to network with students several states away to see how regional differences impact how others think about the Constitution.

Taking it a step further, students could even interact in real time with citizens in another country to examine key differences in constitutional philosophy and law. This can bridge the gap between K-12 and higher

education as it did in [this digital citizenship project](#).

SAMR and Bloom's Technology

Many educators use the SAMR model and [Bloom's Taxonomy](#) in tandem to make their technology integration more purposeful. It's a common mistake, however, to conflate the two models and think that deeper technology integration (the M and R in SAMR) lead to higher order thinking skills defined by Bloom. This is simply not the case.

Create
Evaluate
Analyze
Apply
Understand
Remember
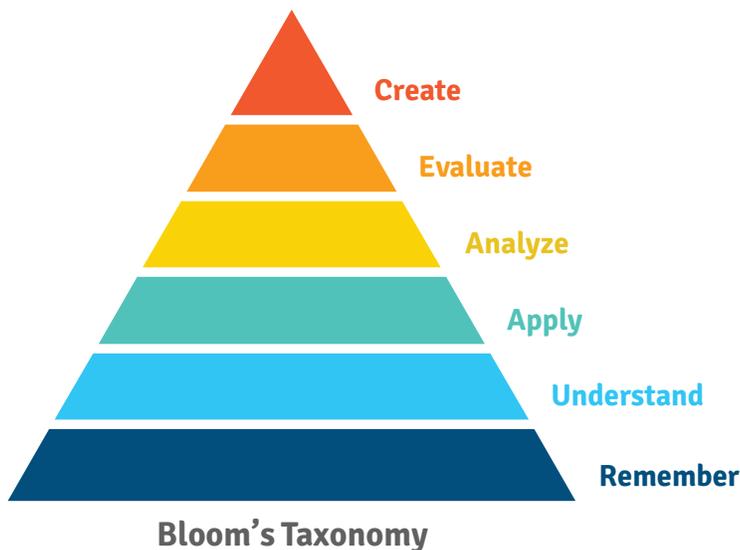
Bloom's Taxonomy

Bloom's Taxonomy is a hierarchical ordering of cognitive skills that can, among countless other uses, help teachers teach and students learn.

So while it may be useful to use SAMR and Bloom's Taxonomy to better flesh out your instructional strategy, keep in mind that they were designed for very different purposes.

When you hear the acronym SAMR, it's mostly in the context of the classroom. But SAMR is a useful framework for integrating technology beyond the classroom as well. In fact, thoughtfully using the framework in faculty meetings, observations, and other everyday activities can increase their effectiveness and model SAMR best practices for participants.

Putting SAMR Model into Context

The buzzwords on everyone's lips for the last decade plus have been "21st-century learning." Educators talk about incorporating technology into lessons on a regular basis, but are you doing it in a meaningful way?

Simply substituting an eBook for a textbook isn't going to cut it. It's important to be purposeful in how you integrate technology into your instruction and not do it simply for technology's sake.

Just don't fall into that ever-present trap of thinking that Redefinition is the goal or the best approach in all cases. Remember: SAMR is a spectrum. Substitution can be your best option for a particular setting. But if the entire instructional approach consists of digitizing your resources without enhancing them—that textbook to ebook transition—then it may be time to evaluate why you're using technology in the first place.

SAMR Model Examples in Action

	Substitution	Augmentation	Modification	Redefinition
Writing Assignment	Students write using a digital tool—such as Google Docs—instead of paper and pencil.	Students use the editing tools in Google Docs to review their own work.	Students share links to their writing with peers. Classmates peer edit and leave feedback on each other's Google Docs.	Students self-publish their writing to a blog, publication, or LMS platform.
Reading Assignment	Students read text online rather than in a physical book.	Students have access to more relevant information with links within text to other websites.	Students click words to hear pronunciation or see visual descriptions in order to have a deeper understanding of the text.	Students read text using audio and video tools and animations.
Research Assignment	Students use Google to research information instead of an encyclopedia.	Students bookmark webpages from their search for future reference.	Students annotate and compare/contrast bookmarked webpages.	Students use their information gathered in their research and comparisons to develop an original work with links back to the original webpages (sources).
Presentation	Students create a slideshow on Powerpoint or Keynote.	Students incorporate images, video, and sound to their slideshow.	Students use audio and video or animation to create a video presentation.	Students share presentation online via LMS or another digital tool, such as YouTube.

Conclusions

The truth is many school environments still look, feel, and consist of the same activities as they did well before computers and the internet were invented. As Alan November explained in his NEXT keynote address, "We should be designing assignments that students can't Google." Project RED also cites that among the many benefits of properly implemented technology are redefined student experiences and transformed intervention strategies.

Layering technology into antiquated tasks isn't going to improve the learning experience. But purposefully altering the substance of these tasks to address the skills students need today (and those they'll need tomorrow) will improve learning.

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