

TECHNOLOGY INTEGRATION SAMR FRAMEWORK

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1

Costly distraction

Meaningful Tools

2

Tech for Tech's sake

Catalyst for Learning

3

Content Coverage

Bridging the Digital Pedagogy Gap

NAVIGATION

PROFESSIONAL SIGNIFICANCE

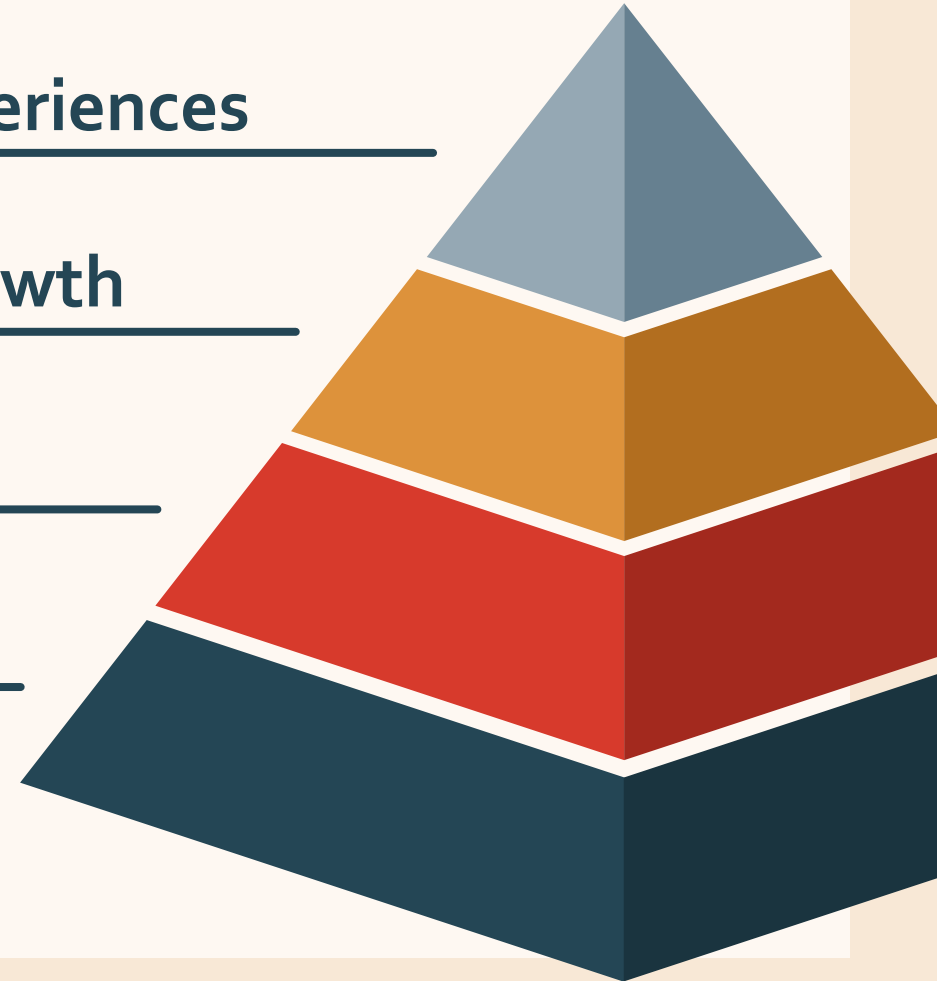


Transforming Educational Experiences

Measurable Professional Growth

Cognitive Scaffolding For Students

Intentional Instructional Design





Model	Full Name	Primary Focus	Key Philosophy
SAMR	Substitution, Augmentation, Modification, Redefinition	Levels of Use	Focuses on the transformation of the task itself.
TPACK	Technological Pedagogical Content Knowledge	Teacher Knowledge	Focuses on the overlap of what you know (Content, Pedagogy, Tech).
TIM	Technology Integration Matrix	Learning Environment	Focuses on student engagement and classroom characteristics.
PICRAT	Passive/Interactive/Creative + Replace/Amplify/Transform	Student Relationship	Focuses on the student's role versus the teacher's tech use.
RAT	Replacement, Amplification, Transformation	Instructional Impact	A simplified version of SAMR focusing on the nature of the change.

THE SAMR MODEL

Dr. Ruben R. Puentedura

S

SUBSTITUTION

Technology acts as a direct substitute, with no functional change

A

AUGMENTATION

Technology acts as a direct substitute, with functional improvement

M

MODIFICATION

Technology allows for significant task redesign

R

REDEFINITION

Technology allows for the creation of new tasks, previously inconceivable

ENHANCEMENT

TRANSFORMATION



**S****SUBSTITUTION**

Technology acts as a direct substitute, with no functional change

What will I gain by replacing the older technology with the new technology?

- Students type an essay on a Word processor instead of writing it by hand.
- The task remains identical.

**A****AUGMENTATION**

Technology acts as a direct substitute, with functional improvement

- **Have I added an improvement to the task process that could not be accomplished with the older technology at a fundamental level?**
- **How does this feature contribute to my design?**

- Students use a Word processor that includes built-in dictionaries, spell-check, and cloud-saving features.
- The task is more efficient, but the core objective is unchanged.



M MODIFICATION

Technology allows for significant task redesign

- **How is the original task being modified?**
- **Does this modification fundamentally depend upon the new technology?**
- **How does this modification contribute to my design?**

- Instead of a static essay, students write a blog post that allows them to embed hyperlinks and multimedia and receive peer feedback via a comment section.

**R****REDEFINITION**

Technology allows for the creation of new tasks, previously inconceivable

- **What is the new task?**
- **Will any portion of the original task be retained?**
- **How is the new task uniquely made possible by the new technology?**
- **How does it contribute to my design?**

- Students collaborate in real-time with a classroom in a different country to co-create a digital documentary, using video conferencing and shared virtual workspaces.



MEASURING THE EXPECTATIONS

Expectation 1: suitably designed formative/summative assessment rubrics will show improvement when compared to traditional instruction.

- Expectation 2: students will show more instances of work at progressively higher levels of Bloom's Taxonomy.



MEASURING THE EXPECTATIONS

- Expectation 3: student work will demonstrate more – and more varied – critical thinking cognitive skills, particularly in areas related to the examination of their own thinking processes.
- Expectation 4: student daily life will reflect the introduction of the technology. This includes (but is not limited to) directly observable aspects such as reduction in student attrition, increase in engagement with civic processes in their community, and engagement with communities beyond their own.



Level	Goal	Scope of Application
Substitution	Efficiency	Replacing physical resources with digital ones to save time or space.
Augmentation	Productivity	Utilizing digital features (auto-save, searchability) to streamline workflows.
Modification	Engagement	Moving toward student-centered learning where the medium changes the output.
Redefinition	Innovation	Solving real-world problems through global collaboration and advanced creation.



- At the **Substitution** and **Augmentation** levels, the pedagogy is often behaviourist or instructional.
- The focus is on content delivery and fluency.
- At the **Modification** and **Redefinition** levels, the pedagogy shifts toward constructivism and connectivism.

**PEDAGOGICAL
APPLICATION**



Start with the "Why," Not the "What"

Use the "SAMR Ladder" Flexibly

Focus on Student Agency

Iterative Reflection

BEST

PRACTICES



SAMR IN ACTION

Subject	Substitution	Augmentation	Modification	Redefinition
Science	Typing a lab report.	Using a spreadsheet to auto-calculate data.	Creating a video documentary of the experiment.	Hosting a live webinar for a local primary school.
History	Reading a biography online.	Using hyperlinked text to research terms.	Building a digital timeline with embedded video.	Creating a "Time Travel" VR experience of the era.
Math	Doing sums on a digital notepad.	Using GeoGebra to visualize a static graph.	Using a screen-recorder to "Think Aloud" through a proof.	Using Python to model and predict local traffic patterns.