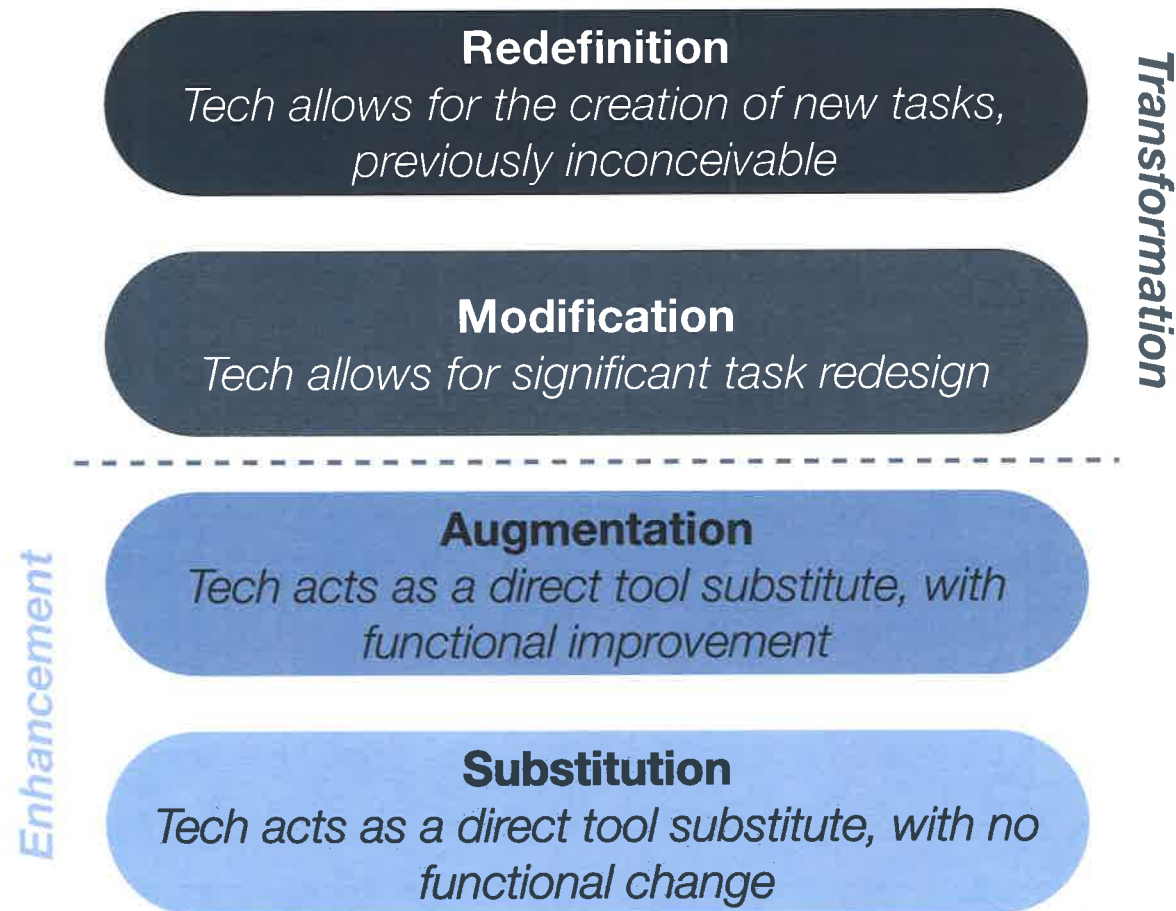# SAMR and TPCK: A Hands-On Approach to Classroom Practice

Ruben R. Puentedura, Ph.D.

Phase 1: Building a Basic SAMR Ladder

Redefinition
Tech allows for the creation of new tasks, previously inconceivable

Modification
Tech allows for significant task redesign

Augmentation
Tech acts as a direct tool substitute, with functional improvement

Substitution
Tech acts as a direct tool substitute, with no functional change

Transformation

Enhancement

Social	Mobility	Visualization	Storytelling	Gaming
200,000 years	70,000 years	40,000 years	17,000 years	8,000 years

The EdTech Quintet – Associated Practices	
Social	Communication, Collaboration, Sharing
Mobility	Anytime, Anyplace Learning and Creation
Visualization	Making Abstract Concepts Tangible
Storytelling	Knowledge Integration and Transmission
Gaming	Feedback Loops and Formative Assessment

Surveying Seymour Papert's Four 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.

- **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.

S. Papert. An Evaluative Study of Modern Technology in Education. MIT Artificial Intelligence Laboratory Memo No. 371. (June, 1976)

Bloom's Taxonomy: Cognitive Processes

Anderson & Krathwohl (2001)	Characteristic Processes	
Remember	• Recalling memorized knowledge • Recognizing correspondences between memorized knowledge and new material	
Understand	• Paraphrasing materials • Exemplifying concepts, principles • Classifying items • Summarizing materials	• Extrapolating principles • Comparing items
Apply	• Applying a procedure to a familiar task • Using a procedure to solve an unfamiliar, but typed task	
Analyze	• Distinguishing relevant/irrelevant or important/unimportant portions of material • Integrating heterogeneous elements into a structure • Attributing intent in materials	
Evaluate	• Testing for consistency, appropriateness, and effectiveness in principles and procedures • Critiquing the consistency, appropriateness, and effectiveness of principles and procedures, basing the critique upon appropriate tests	
Create	• Generating multiple hypotheses based on given criteria • Designing a procedure to accomplish an untyped task • Inventing a product to accomplish an untyped task	

Lorin W. Anderson and David R. Krathwohl (Eds.), *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives, Complete Edition.* Longman. (2000)

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