



Technology Integration Matrix

ENTRY
The teacher begins to use technology to deliver curriculum content to students.

ADOPTION
The teacher directs students in the conventional and procedural use of technology tools.

ADAPTATION
The teacher facilitates students in exploring and independently using technology tools.

INFUSION
The teacher provides the learning context and the students choose the technology tools to achieve the outcome.

TRANSFORMATION
The teacher encourages the innovative use of tech tools to facilitate higher-order learning activities that may not have been possible without technology.

ACTIVE
Students are actively engaged in using technology as a tool rather than passively receiving information from the technology.

Active Entry
Information passively received

Active Adoption
Conventional, procedural use of tools

Active Adaptation
Conventional independent use of tools; some student choice and exploration

Active Infusion
Choice of tools and regular, self-directed use

Active Transformation
Extensive and unconventional use of tools

COLLABORATIVE
Students use technology tools to collaborate with others rather than working individually at all times.

Collaborative Entry
Individual student use of tools

Collaborative Adoption
Collaborative use of tools in conventional ways

Collaborative Adaptation
Collaborative use of tools; some student choice and exploration

Collaborative Infusion
Choice of tools and regular use for collaboration

Collaborative Transformation
Collaboration with peers and outside resources in ways not possible without technology

CONSTRUCTIVE
Students use tech tools to connect new information to their prior knowledge rather than passively receive information.

Constructive Entry
Information delivered to students

Constructive Adoption
Guided, conventional use for building knowledge

Constructive Adaptation
Independent use for building knowledge; some student choice and exploration

Constructive Infusion
Choice and regular use for building knowledge

Constructive Transformation
Extensive and unconventional use of technology tools to build knowledge

AUTHENTIC
Students use tech tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments.

Authentic Entry
Use unrelated to the world outside of the instructional setting

Authentic Adoption
Guided use in activities with some meaningful context

Authentic Adaptation
Independent use in activities connected to students' lives; some student choice and exploration

Authentic Infusion
Choice of tools and regular use in meaningful activities

Authentic Transformation
Innovative use for higher-order learning activities in a local or global context

GOAL-DIRECTED
Students use tech tools to set goals, plan activities, monitor progress, and evaluate results rather than simply completing assignments without reflection.

Goal-Directed Entry
Directions given; step-by-step task monitoring

Goal-Directed Adoption
Conventional and procedural use of tools to plan and monitor

Goal-Directed Adaptation
Purposeful use of tools to plan and monitor; some student choice and exploration

Goal-Directed Infusion
Flexible and seamless use of tools to plan and monitor

Goal-Directed Transformation
Extensive and higher-order use of tools to plan and monitor

The TECHNOLOGY INTEGRATION MATRIX (TIM) provides a framework for describing and targeting the use of technology to enhance learning. The TIM incorporates five interdependent characteristics of meaningful learning environments: active, collaborative, constructive, authentic, and goal-directed. These characteristics are associated with five levels of technology integration: entry, adoption, adaptation, infusion, and transformation. Together, the five characteristics of meaningful learning environments and five levels of technology integration create a matrix of 25 cells, as illustrated above.



<http://fcit.usf.edu/matrix/>