



# TIM: Constructive Learning

*This table contains the extended descriptors for Constructive Learning on the Technology Integration Matrix (TIM).*

The Constructive attribute describes learner-centered instruction that allows students to use technology tools to connect new information to their prior knowledge. This characteristic is concerned with the flexible use of technology to build knowledge in the modality that is most effective for each student. Descriptors for typical student activity, teacher activity, and instructional settings for Constructive learning are provided below.

Constructive Learning <i>at the</i> ENTRY LEVEL	Constructive Learning <i>at the</i> ADOPTION LEVEL	Constructive Learning <i>at the</i> ADAPTATION LEVEL	Constructive Learning <i>at the</i> INFUSION LEVEL	Constructive Learning <i>at the</i> TRANSFORMATION LEVEL
<p><b>Information delivered to students</b></p> <p><b>Students.</b> Students receive information from The teacher via technology.</p> <p><b>Teacher.</b> The teacher uses technology to deliver information to students.</p> <p><b>Setting.</b> The setting allows the teacher to present content to all students.</p>	<p><b>Guided, conventional use for building knowledge</b></p> <p><b>Students.</b> Students begin to utilize technology tools to build on prior knowledge and construct meaning.</p> <p><b>Teacher.</b> The teacher provides some opportunities for students to use technology in conventional ways to build knowledge and experience. The students construct meaning about the relationships between prior knowledge and new learning, but the teacher makes the choices regarding technology use.</p> <p><b>Setting.</b> Basic technology tools that allow for building knowledge are available on a limited basis to students for conventional uses.</p>	<p><b>Independent use for building knowledge; some student choice and exploration</b></p> <p><b>Students.</b> Students begin to use technology tools independently to facilitate construction of meaning. With their growing conceptual understanding of the technology tools, students can explore the use of these tools as they are building knowledge.</p> <p><b>Teacher.</b> The teacher creates instruction in which students' use of technology tools is integral to building an understanding of a concept. The teacher gives the students access to technology tools and guides them in exploring and choosing appropriate resources.</p> <p><b>Setting.</b> Technology tools that facilitate the construction of meaning are available to students for conventional use.</p>	<p><b>Choice and regular use for building knowledge</b></p> <p><b>Students.</b> Students consistently have opportunities to select technology tools and use them in the way that best facilitates their construction of understanding.</p> <p><b>Teacher.</b> The teacher consistently allows students to select technology tools to use in building an understanding of a concept. The teacher provides a context in which technology tools are seamlessly integrated into a lesson, and is supportive of student autonomy in choosing the tools and when they can best be used to accomplish the desired outcomes.</p> <p><b>Setting.</b> The setting includes a variety of technology tools and access to rich online resources to meet the needs of all students.</p>	<p><b>Extensive and unconventional use of technology tools to build knowledge</b></p> <p><b>Students.</b> Students use technology to construct and share knowledge in ways that may not be possible without technology. Their deep understanding of the technology tools allows them to extend the use of the tools in creative ways to construct meaning.</p> <p><b>Teacher.</b> The teacher facilitates higher-order learning opportunities in which students regularly engage in activities that may be impossible to achieve without the use of technology tools. The teacher encourages students to explore the use of technology in unconventional ways and to use the full capacity of multiple tools in order to build knowledge.</p> <p><b>Setting.</b> The setting includes robust access to a wide variety of technology tools, robust access to online resources and communities, and the ability to publish new content online.</p>