Notes on These Slides

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The Technology Integration Matrix: Introducing the Five Levels of Tech Integration

THE TECHNOLOGY INTEGRATION MATRIX

Levels of Technology Integration

Characteristics of the Learning Environment

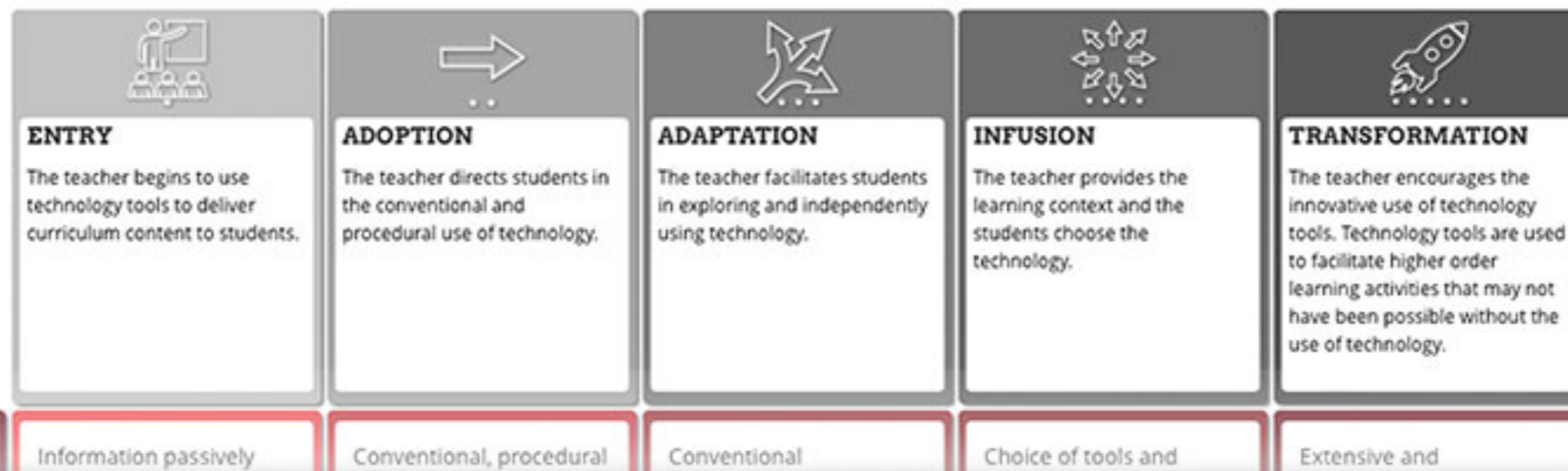|	ENTRY LEVEL	ADOPTION LEVEL	ADAPTATION LEVEL	INFUSION LEVEL	TRANSFORMATION LEVEL
	The teacher begins to use technology tools to deliver curriculum content to students.	The teacher directs students in the conventional and procedural use of technology tools.	The teacher facilitates the students' exploration and independent use of technology tools.	The teacher provides the learning context and the students choose the technology tools.	The teacher encourages the innovative use of technology tools to facilitate higher-order learning activities that may not be possible without the use of technology.
ACTIVE LEARNING — 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 LEARNING — Students use technology tools to collaborate with others rather than working individually at all times.	**Collaborative Entry** — Individual student use of technology 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, outside experts, and others in ways that may not be possible without technology
CONSTRUCTIVE LEARNING — Students use technology tools to connect new information to their prior knowledge rather than to 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 LEARNING — Students use technology tools to link learning activities to the world beyond the instructional setting rather than working on decontextualized assignments.	**Authentic Entry** — Technology 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 connected to the world beyond the instructional setting
GOAL-DIRECTED LEARNING — Students use technology 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 or 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

Five Levels of Technology Integration

Each column of the Technology Integration Matrix represents one of the five levels:

- Entry Level
- Adoption Level
- Adaptation Level
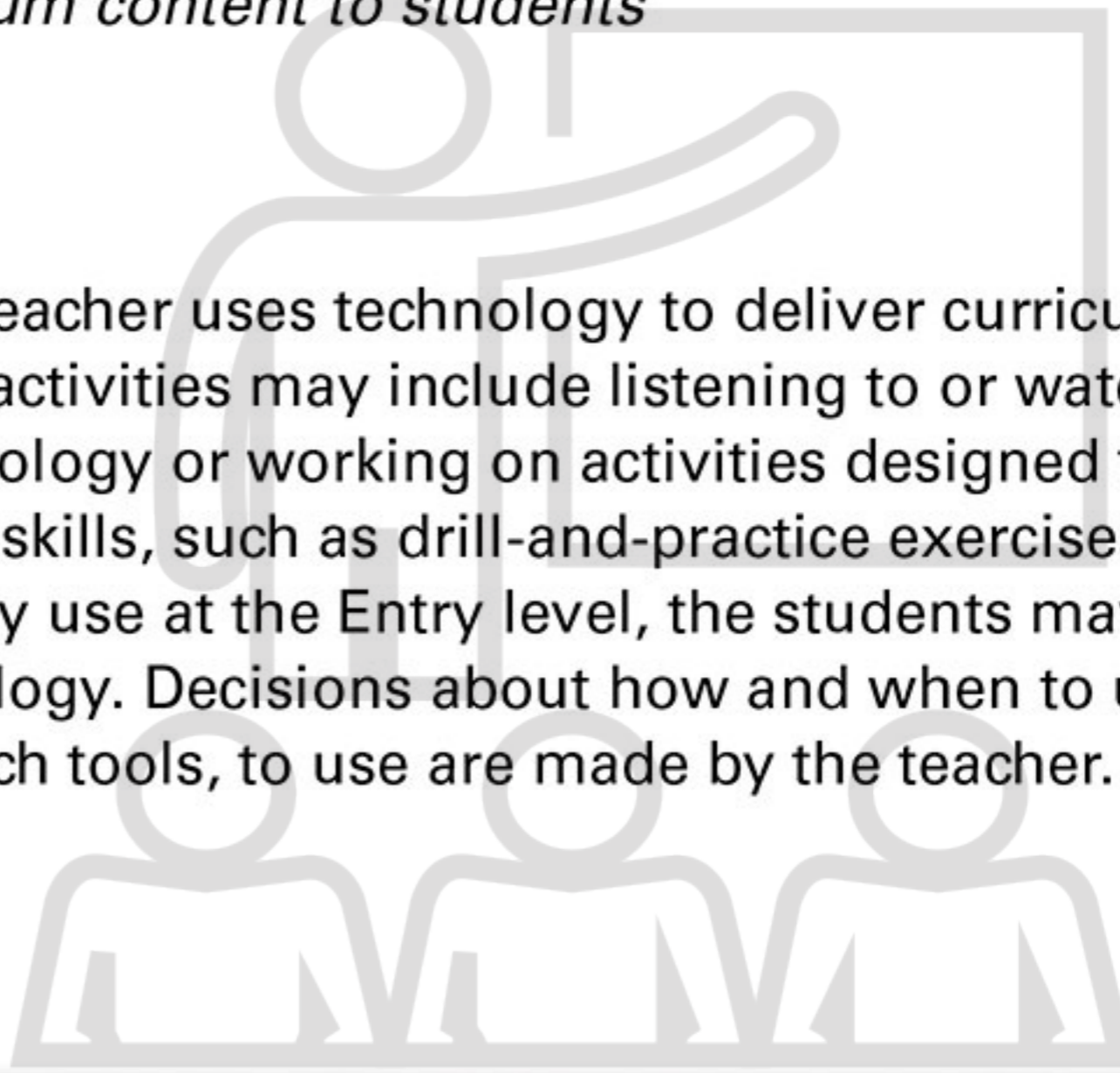- Infusion Level
- Transformation Level

ENTRY

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

ADOPTION

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

ADAPTATION

The teacher facilitates students in exploring and independently using technology.

INFUSION

The teacher provides the learning context and the students choose the technology.

TRANSFORMATION

The teacher encourages the innovative use of technology tools. Technology tools are used to facilitate higher order learning activities that may not have been possible without the use of technology.

Information passively

Conventional, procedural

Conventional

Choice of tools and

Extensive and

Levels of Technology Integration
ENTRY

The teacher begins to use technology tools to deliver curriculum content to students

At the Entry level, typically the teacher uses technology to deliver curriculum content to students. Entry level activities may include listening to or watching content delivered through technology or working on activities designed to build fluency with basic facts or skills, such as drill-and-practice exercises. In a lesson that includes technology use at the Entry level, the students may not have direct access to the technology. Decisions about how and when to use technology tools, as well as which tools, to use are made by the teacher.

Levels of Technology Integration
ADOPTION

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

At the Adoption level, technology tools are used in conventional ways. The teacher makes decisions about which technology tool to use and when and how to use it. Students' exposure to individual technology tools may be limited to single types of tasks that involve a procedural understanding.

Levels of Technology Integration

ADAPTATION

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

At the Adaptation level, the teacher incorporates technology tools as an integral part of the lesson. While the teacher makes most decisions about technology use, the teacher guides the students in the independent use of technology tools. Students have a greater familiarity with the use of technology tools and have a more conceptual understanding of the tools than students at the Adoption level. They are able to work without direct procedural instruction from the teacher and begin to explore different ways of using the technology tools.

Levels of Technology Integration

INFUSION

The teacher provides the learning context and the students choose the technology tools.

At the Infusion level, a range of different technology tools are integrated flexibly and seamlessly into teaching and learning. Technology tools are available to meet the needs of all students. Students are able to make informed decisions about when and how to use different tools. The instructional focus is on student learning and not on the technology tools themselves. For this reason, Infusion level work typically occurs after teachers and students have experience with a particular technology tool. The teacher guides students to make decisions about when and how to use technology.

Levels of Technology Integration
TRANSFORMATION

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

At the Transformation level, students use technology tools flexibly to achieve specific learning outcomes. The students have a conceptual understanding of the tools coupled with extensive practical knowledge about their use. Students apply that understanding and knowledge, and students may extend the use of technology tools. They are encouraged to use technology tools in unconventional ways and are self-directed in combining the use of various tools. The teacher serves as a guide, mentor, and model in the use of technology. At this level, technology tools are often used to facilitate higher-order learning activities that may not be possible, or would be difficult to accomplish without the use of technology.

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