TIM Tech Talks

- Prepared and delivered by **Kashuan Hopkins**
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  - Slides: t.ly/VcDa {case sensitive}
  - Technology Integration Matrix by the Florida Center of Instructional Technology.

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What are we doing?

- Introduction & Objective
- Why use a technology integration framework?
- Why use the TIM model?
- Breaking down the TIM rows and columns.
- Applications: Pre-assessing, Planning, Evaluating.
- Advice, “Goodies”, Evaluation, and Questions.

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What are we learning?

"After this training, teachers will be able to apply the five rows and columns of the **TIM model** to integrate technology in their classroom."

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Design a kitchen without a framework?

Need?

Future?

Success?

Compare?

White Wooden Kitchen Cabinet by Jean van der Meulen

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Why Use a Tech Integration Framework?

Integrated technology should be used to "transform learning experiences with the goal of providing greater equity and accessibility" (US Office of Educational Technology, 2017).

- Research-based.
- Creativity and autonomy within structure.
- Supports digital literacy.

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Why Use the TIM Model?

- Developed by a team and written in teacher language.
- Designed for the classroom, tech coaches, educational leaders, and researchers.
- Tons of free resources by the creators (e.g. descriptors, PD, presentations, graphics, handouts, etc).
    - With subscription, there are evaluation tools.
- TIM deeply unpacks the TPK part of TPCK.

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Breaking down TIM rows

"Five Characteristics of Meaningful Learning Environments"

- Active: students engage.
- Collaborative: students work with others.
- Constructive: students connect new info to old info.
- Authentic: students input learning into a context.
- Goal-Directed: students create goals, monitor progress, and evaluate results.

Pattern?

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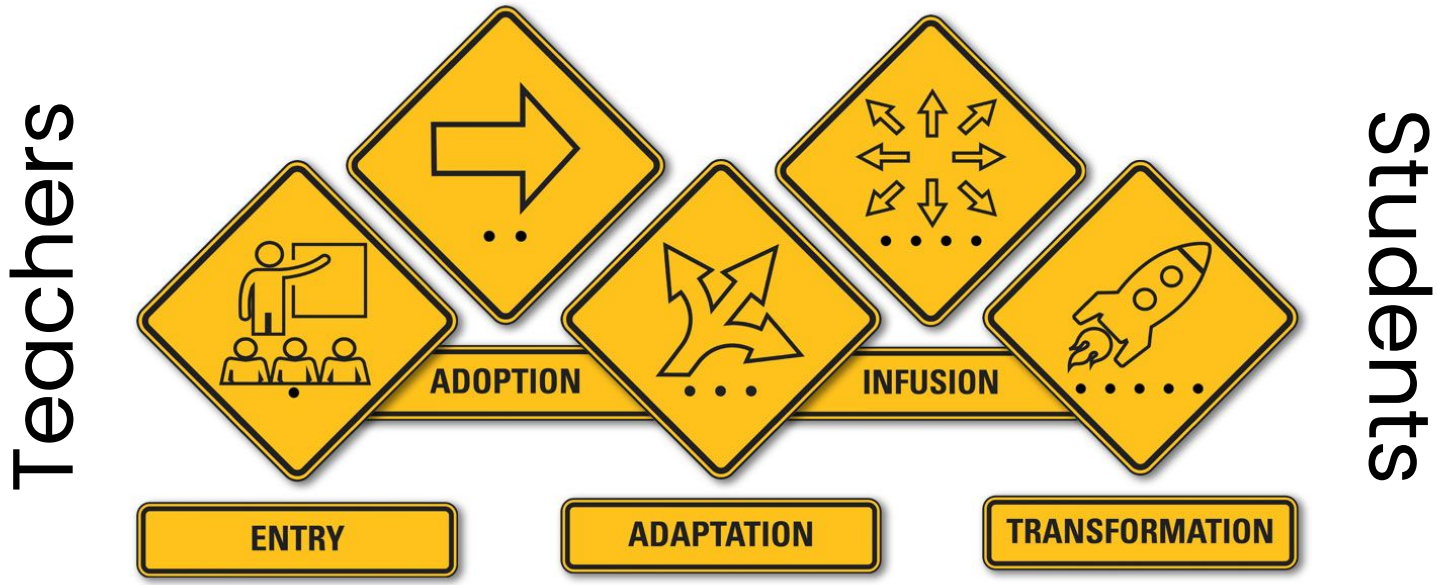
Breaking down TIM columns

"Five Levels of Technology Integration"



Level Icons as Road Signs by the Florida Center for Instructional Technology.

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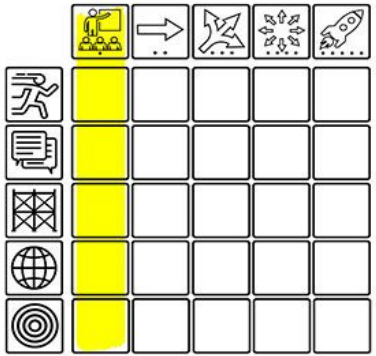


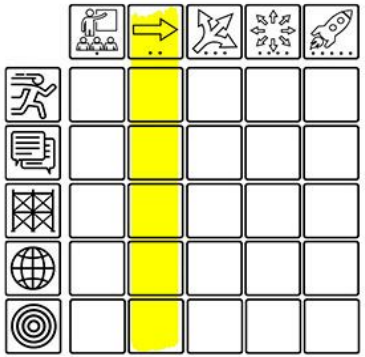
Levels of Technology Integration

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.

Five Levels of Technology Integration Presentation by the Florida Center for Instructional Technology.



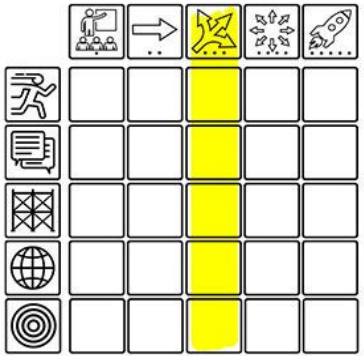
Levels of Technology Integration

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.

Five Levels of Technology Integration Presentation by the Florida Center for Instructional Technology.



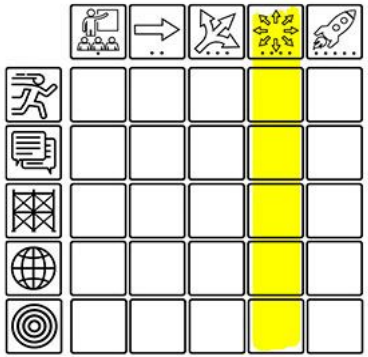
Levels of Technology Integration

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.

Five Levels of Technology Integration Presentation by the Florida Center for Instructional Technology.



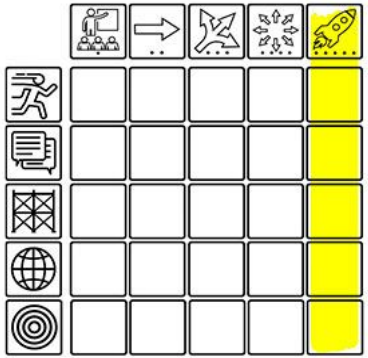
Levels of Technology Integration

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.

Five Levels of Technology Integration Presentation by the Florida Center for Instructional Technology.



Levels of Technology Integration

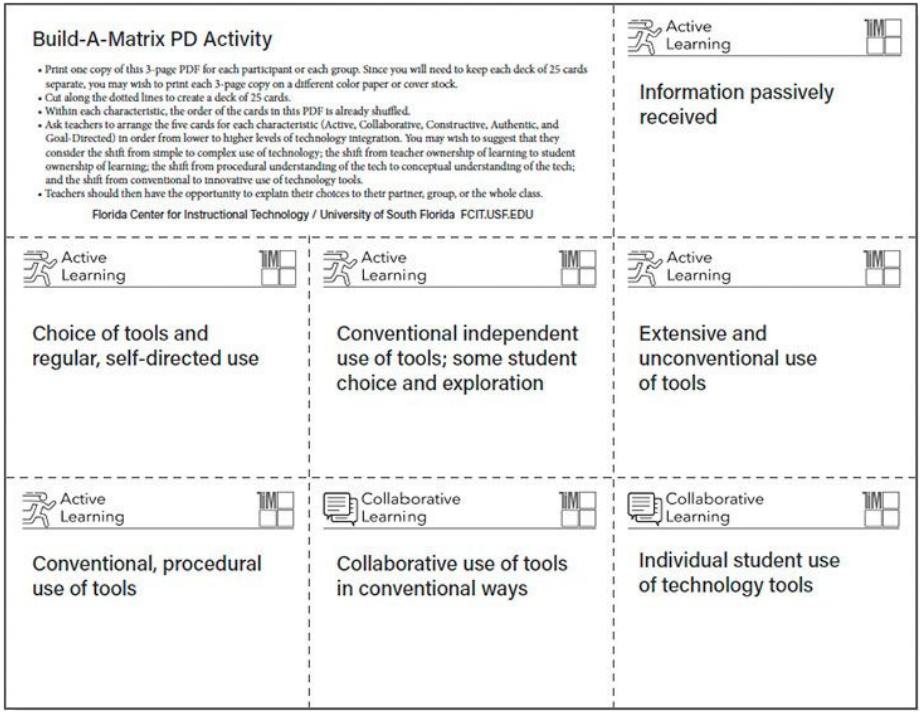
TRANSFORMATION

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.

Five Levels of Technology Integration Presentation by the Florida Center for Instructional Technology.

Pre-assessing: TIM Sort Activity



Build-A-Matrix PD Activity

- Print one copy of this 3-page PDF for each participant or each group. Since you will need to keep each deck of 25 cards separate, you may wish to print each 3-page copy on a different color paper or cover stock.
- Cut along the dotted lines to create a deck of 25 cards.
- Within each characteristic, the order of the cards in this PDF is already shuffled.
- Ask teachers to arrange the five cards for each characteristic (Active, Collaborative, Constructive, Authentic, and Goal-Directed) in order from lower to higher levels of technology integration. You may wish to suggest that they consider the shift from simple to complex use of technology; the shift from teacher ownership of learning to student ownership of learning; the shift from procedural understanding of the tech to conceptual understanding of the tech; and the shift from conventional to innovative use of technology tools.
- Teachers should then have the opportunity to explain their choices to their partner, group, or the whole class.

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Active Learning

Information passively received

Active Learning

Choice of tools and regular, self-directed use

Active Learning

Conventional independent use of tools; some student choice and exploration

Active Learning

Extensive and unconventional use of tools

Active Learning

Conventional, procedural use of tools

Collaborative Learning

Collaborative use of tools in conventional ways

Collaborative Learning

Individual student use of technology tools

Build-A-Matrix PD Activity: Printed Card Sort by the Florida Center for Instructional Technology.

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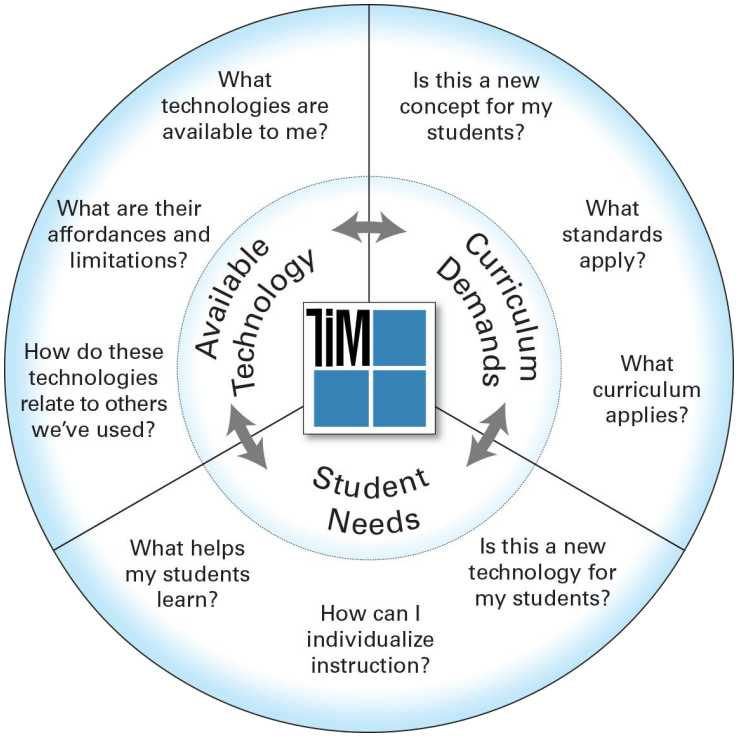
TIM Instructional Planning Model



TIM Instructional Planning Model Illustration reproduced from: Harmes, J. C., Welsh, J. L., & Winkelman, R. J. (2016). A framework for defining and evaluating technology integration in the instruction of real-world skills. In S. Ferrara, Y. Rosen, & M. Tager (Eds.), Handbook of research on technology tools for real-world skill development (pp. 137-162). Hershey, PA: IGI Global.

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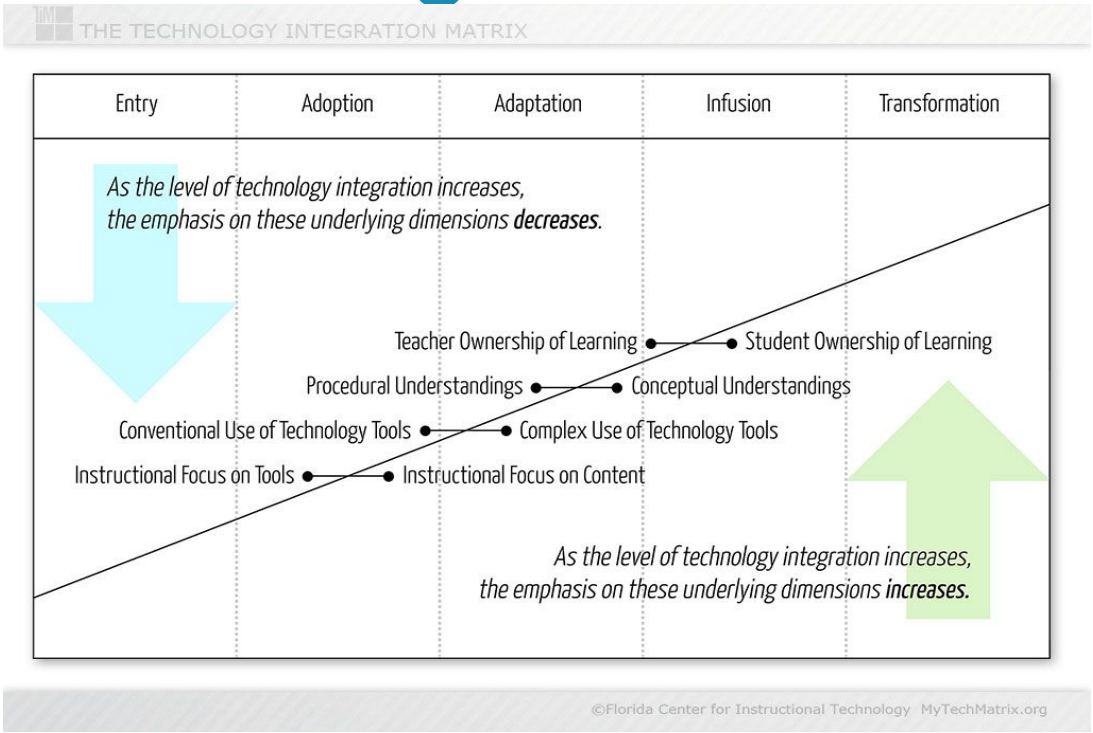
Evaluating: Teacher, Student, Context



[TIM Summary and Extended Descriptors] by the [Florida Center for Instructional Technology].

[Underlying Dimensions Slide] by the [Florida Center for Instructional Technology].

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Starting Advice

- Start small.
- Let them play.
- Anticipate support.
- Be patient.
- Focus on purpose.

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TIM Goodies

- Technology Integration Matrix by the Florida Center for Instructional Technology.
  - Build the TIM Sort Activity - available as a deck of cards, large poster-sized printable, and online interactive.
  - TIM Instructional Planning Model Illustration
  - TIM Summary and Extended Descriptors.
  - **Full TIM resource page**.

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Other Tech Integration Goodies pt. 1

- SAMR Model by Dr. Ruben Puentedura - categorizes technology integration into a 4-level hierarchy organized from less to most complex level of integration.
- TPACK Framework by Punya Mishra and Matthew J. Koehler of Michigan State University - analyzes the interaction between technological, pedagogical, and content knowledge.
- 2017 National Education Technology Plan by the US Office of Technology Education - national policy document.

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Other Tech Integration Goodies pt. 2

- ISTE Standards for Students by the International Society for Technology in Education (ISTE) - standards are available for educators, administrators, and more.
- PIC-RAT Framework by Dr. Royce Kimmons - analyzes the intersection between students' and the teacher's role in technology.
- Triple E Framework by Liz Kolb - measures to what degree technology is being integrated into a lesson.

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Thank you!

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