FLIPPING THE CLASSROOM

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Introduction to Flipping the Classroom

Traditional Classroom Learning Approach

Before the Class

The learners come to the classroom based on the topic and schedule given to them.

In the Classroom

The instructor delivers the lecture to the classroom and provides with the study material.

After the Class

The learners are given practice exercises or activities to enhance their learning.

Flipped Classroom Learning Approach

Before the Class

The learners are given study material to read and assimilate the learning content.

In the Classroom

The learners discuss the content with their peers and the instructor.

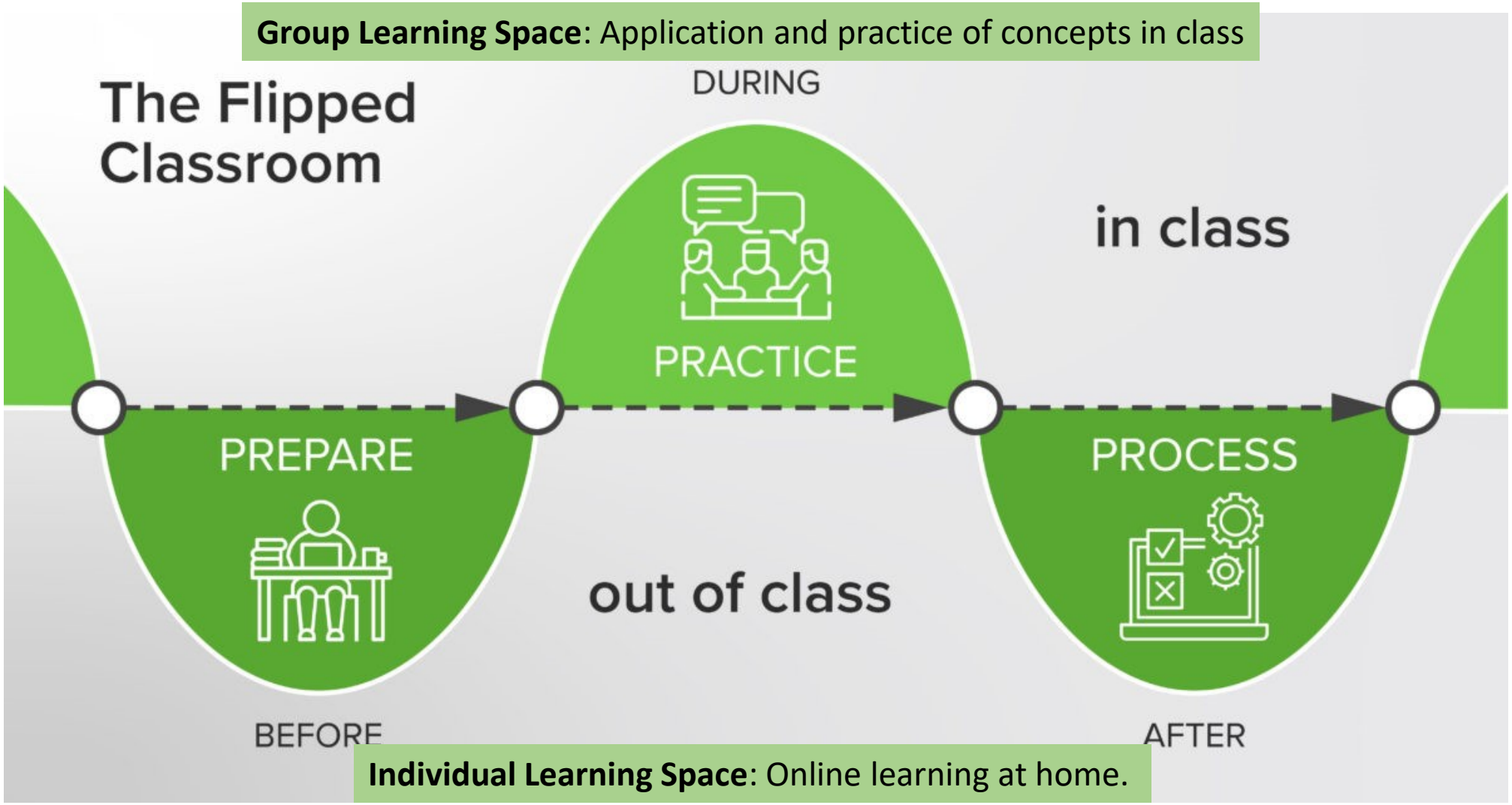
After the Class

The learners check and confirm their understanding by doing further learning activities.

Introduction to Flipping the Classroom

Objective: Transform lesson time on campus into **dynamic**, **interactive** learning.

Group Learning Space: Application and practice of concepts in class



Individual Learning Space: Online learning at home.

Introduction to Flipping the Classroom

Historical Context

Emergence: First decade of the 21st century.

Educational Experimentation: Shift from **teacher-centered to learner-centered** models.

Technology and Media: Utilization of digital tools and social media.

Introduction to Flipping the Classroom

Pre-Class Preparation

Content Delivery: Various formats (videos, texts, podcasts, websites).

Independent Study: Students study basic knowledge at home.

In-Class Transformation

Active Learning Environment: Interactive and dynamic.

Teacher's Role: Guide students in applying concepts and techniques.

Deeper Insight: Focus on deeper knowledge

Wide range of activities.
Enhanced teacher-student and peer-to-peer engagement.
Collaborative learning among students.
In-class time used for deeper understanding.
More interactive and engaging classroom experiences.
Tailored feedback and guidance from teachers

Terminology

THE METHOD

Face-to-face

Online learning

FLIPPED CLASSROOM

BLENDED LEARNING

Introduction to Flipping the Classroom

Online Teaching

Synchronous Examples: Live teaching via video conferencing tools (Teams, Zoom).
Asynchronous Examples: recorded webinars, pre-recorded lessons.

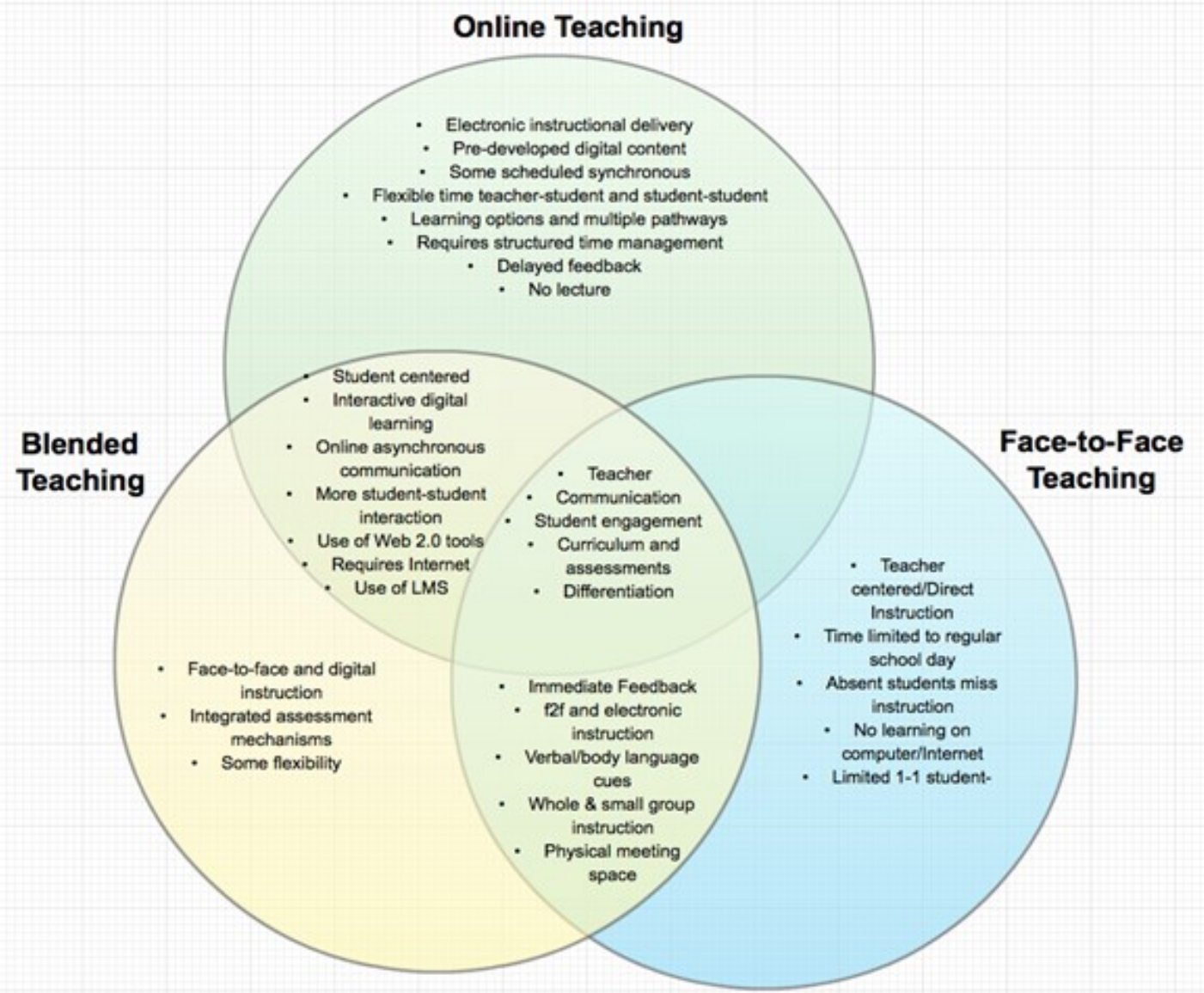
Flipped Classroom

Combines online and face-to-face instruction
Pre-Class Learning
In-Class Learning

Blended Learning

A mix of distance (online) and face-to-face learning in various combinations

Introduction to Flipping the Classroom



Teaching Principles of Flipped Classroom (FTC)

Integration of Knowledge Domains:

- **Content** Knowledge (CK)
- **Technological** Knowledge (TK)
- **Pedagogical** Knowledge (PK)
- **Knowledge of the ConteXt** (XK)

Teaching Principles of Flipped Classroom (FTC)

TPACK (Mishra, 2019):

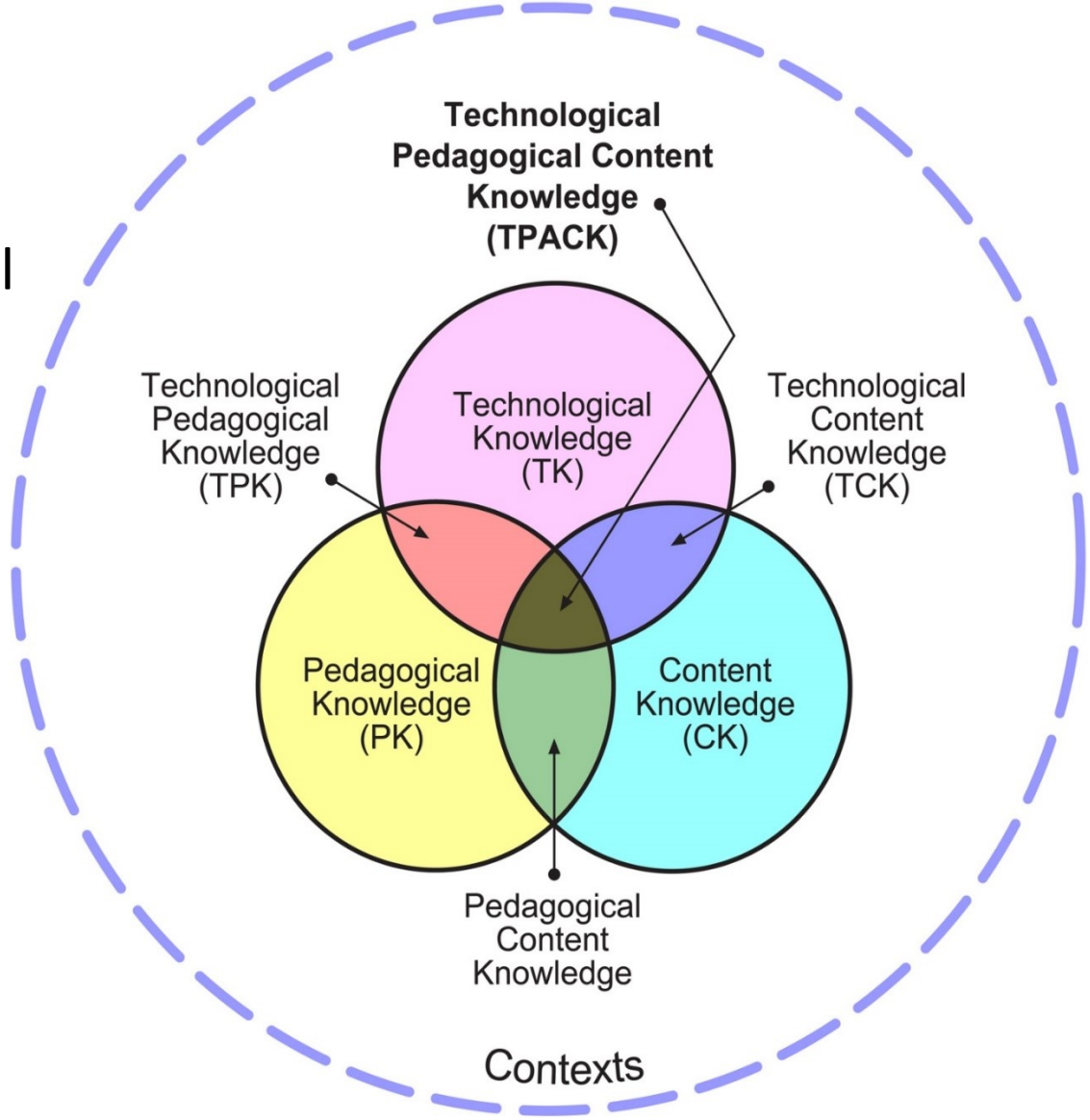
- Combines essential knowledge areas for effective ICT integration
- Acknowledges situational and organizational constraints

Teacher Training Focus:

- Theoretical foundations of ICT in education
- Practical application and implementation of ICT
- Addressing both disciplinary and pedagogical levels

Key Insight:

Sustainable change in FTC relies on a holistic approach integrating CK, TK, PK, and XK



Teaching Principles of Flipped Classroom (FTC)

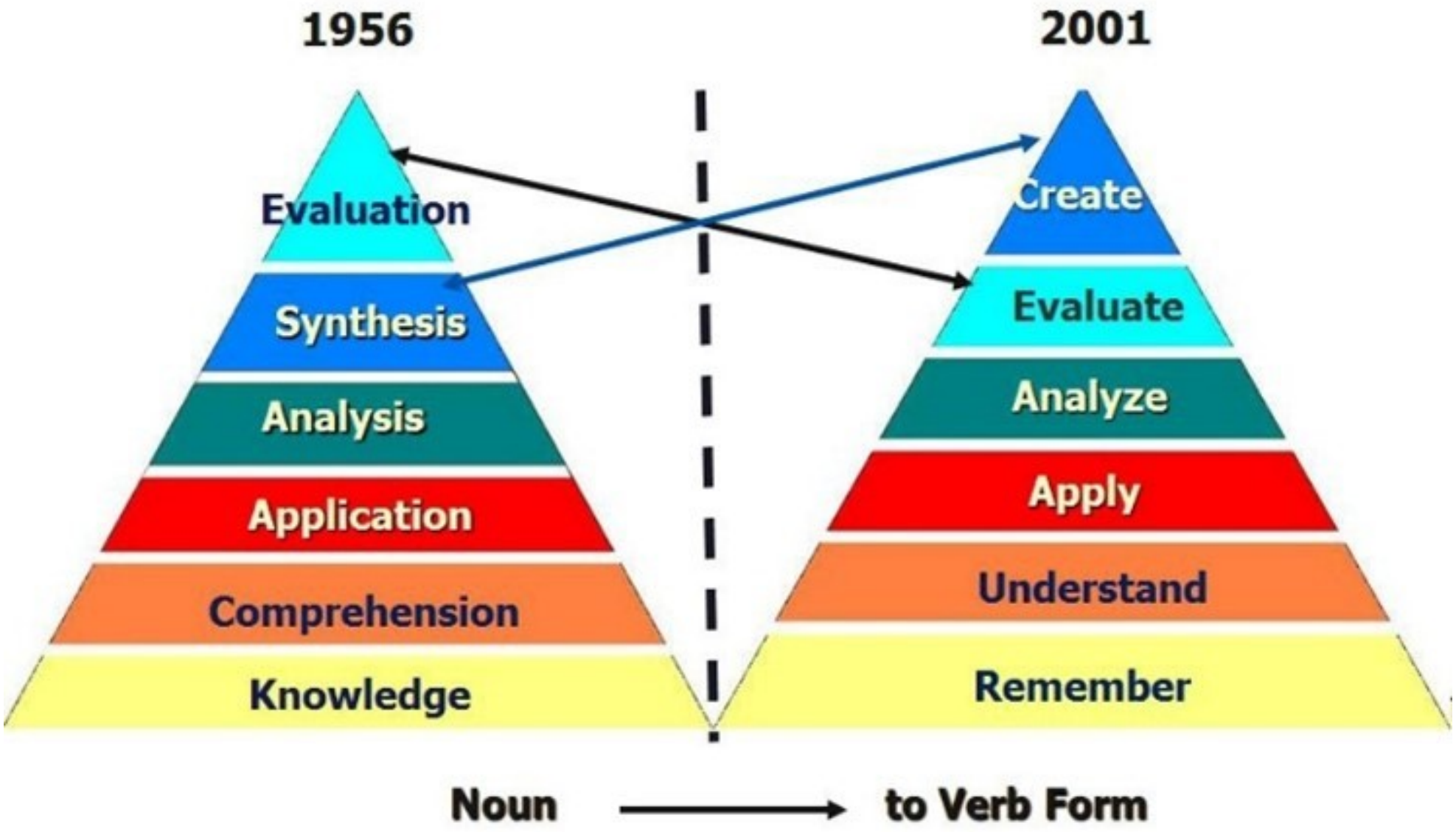
TPACK-Model and Bloom's Taxonomy

- **Integration with Bloom's Taxonomy**:

  - **TPACK-Model Compatibility**: Aligns with Bloom's Taxonomy, a widely used framework for course design, Student Learning Outcomes (SLOs), and assessments.

  - **Bloom's Taxonomy Overview**: Classifies thinking skills into six hierarchical categories from lower to higher order.

Teaching Principles of Flipped Classroom (FTC)



Teaching Principles of Flipped Classroom (FTC)

3D Framework for Bloom's Taxonomy

- **Cognitive Domain**: Intersection of Cognitive Process and Knowledge dimensions.
- **Knowledge Dimension**: From concrete (factual, conceptual, procedural) to abstract (metacognitive).
- **Contextual Factors**:Curriculum, context, learners' needs.

•**Formulating Objectives**:

- Define objectives at intersections of cognitive processes and knowledge dimensions.
- Consider curriculum, context, and learners.

•**Application in Flipped Classroom**:

- Connect content delivery (online or F2F) to learning activities.
- Align objectives with flipped classroom method for effective learning.

Teaching Principles of Flipped Classroom (FTC)

A statement of a **learning objective** contains a verb (an action) and an object (usually a noun).

- The verb generally refers to [actions associated with] the intended cognitive process.
- The object generally describes the knowledge students are expected to acquire or construct. (Anderson and Krathwohl, 2001, pp. 4–5)

In this model, each of the colored blocks shows an example of a learning objective that generally corresponds with each of the various combinations of the cognitive process and knowledge dimensions.

Remember: these are **learning objectives**—not learning activities. It may be useful to think of preceding each objective with something like: "Students will be able to . . ."

*Anderson, L.W. (Ed.), Krathwohl, D.R. (Ed.), Airasian, P.W., Cruikshank, K.A., Mayer, R.E., Pintrich, P.R., Raths, J., & Wittrock, M.C. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's Taxonomy of Educational Objectives* (Complete edition). New York: Longman.

Model created by: Rex Heer
Iowa State University
Center for Excellence in Learning and Teaching
Updated January, 2012
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For additional resources, see:
www.celt.iastate.edu/teaching/RevisedBloomsCI.html

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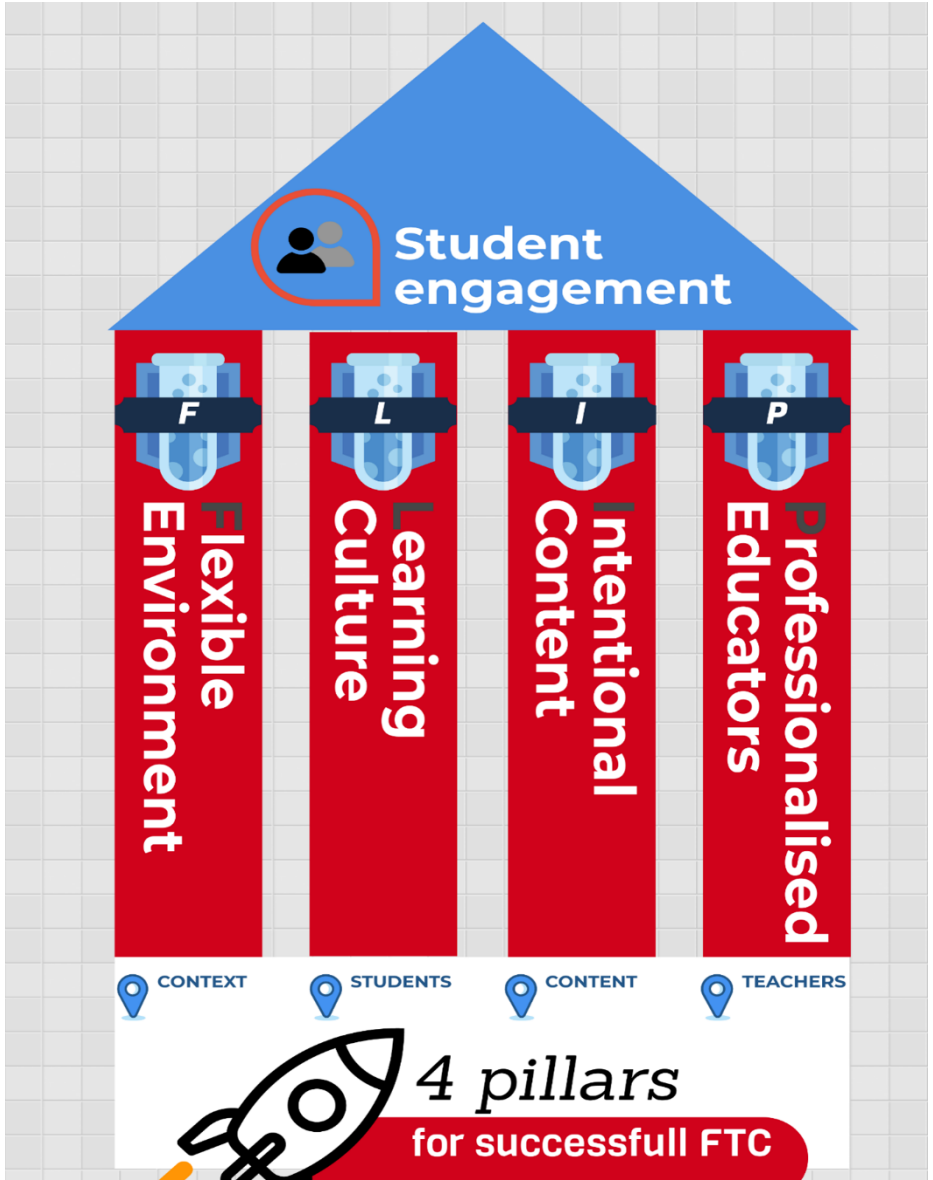
FLIP Pillars

1. **Flexible Learning Environment**: Importance of adaptability and flexibility in the learning space.

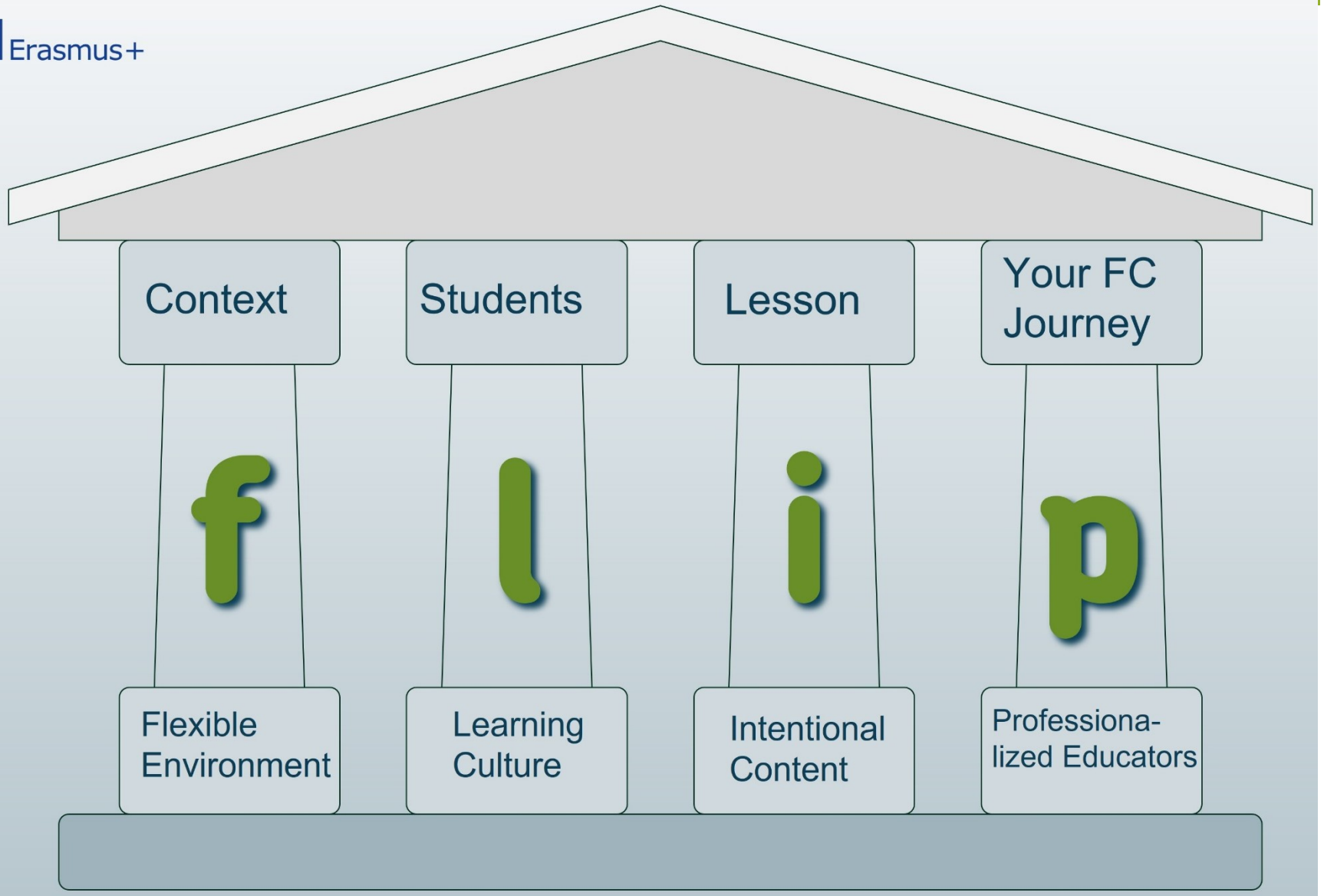
2. **Learning Content Selection**: Careful selection of content tailored for flipped classroom implementation.

3. **Viable Learning Culture**: Establishment of a conducive learning environment within the institution, department, and among students.

4. **Professionalized Educators**: Essential role of well-trained and supported educators in successfully implementing FTC.



FLIP Pillars



The Flipped Classroom journey for a teacher

Understanding Flipped Classroom Concepts

Identifying Suitable Content

Creating Pre-Class Materials

Implementing In-Class Activities

Providing Support and Guidance

Assessing Student Learning

Reflecting and Iterating

The Flipped Classroom journey for a teacher

1. **Understanding Flipped Classroom Concepts**:
    1. Gain familiarity with the principles and benefits of Flipped Classroom teaching.
    2. Learn about the role reversal in traditional teaching methods, where instruction is delivered outside of class and application occurs during class time.
2. **Identifying Suitable Content**:
    1. Select appropriate lesson content that can be effectively delivered outside of class.
    2. Determine which topics or concepts lend themselves well to pre-recorded videos, readings, or other resources for students to engage with independently.
3. **Creating Pre-Class Materials**:
    1. Develop or curate resources such as videos, presentations, readings, or online activities for students to review before class.
    2. Ensure that materials are engaging, informative, and aligned with learning objectives.
4. **Implementing In-Class Activities**:
    1. Plan interactive and engaging activities for class time, focusing on application, discussion, and deeper understanding of the pre-class materials.
    2. Incorporate active learning strategies, group work, and opportunities for peer collaboration.
5. **Providing Support and Guidance**:
    1. Offer support and guidance to students as they engage with pre-class materials.
    2. Address any questions or concerns they may have, and provide additional resources or clarification as needed.
6. **Assessing Student Learning**:
    1. Develop assessments that gauge students' understanding and application of the course material.
    2. Consider using a variety of assessment methods, such as quizzes, discussions, projects, or presentations.
7. **Reflecting and Iterating**:
    1. Reflect on the effectiveness of the Flipped Classroom approach in meeting learning objectives and engaging students.
    2. Gather feedback from students and colleagues, and use it to make adjustments and improvements for future implementations.