

# Purposefully Aligning Pedagogy with Technology in an Online Teacher Professional Development Course

CONCISE PAPER

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TRANSFORMING LIVES AND SOCIETIES



Transformative Online Pedagogies \* Reimagining Online Education for Better Futures \* Innovative Learning Designs for Student Success

# PURPOSE OF THE PRESENTATION

1. Present findings from a self-study of design practice
2. Propose (1) pedagogical intent and (2) process for aligning pedagogy with technology

## Audience:

- × Curriculum planners
- × Instructional/Learning designers
- × Teacher educators, teachers, instructors
- × Anyone who cares about improving the quality of learning



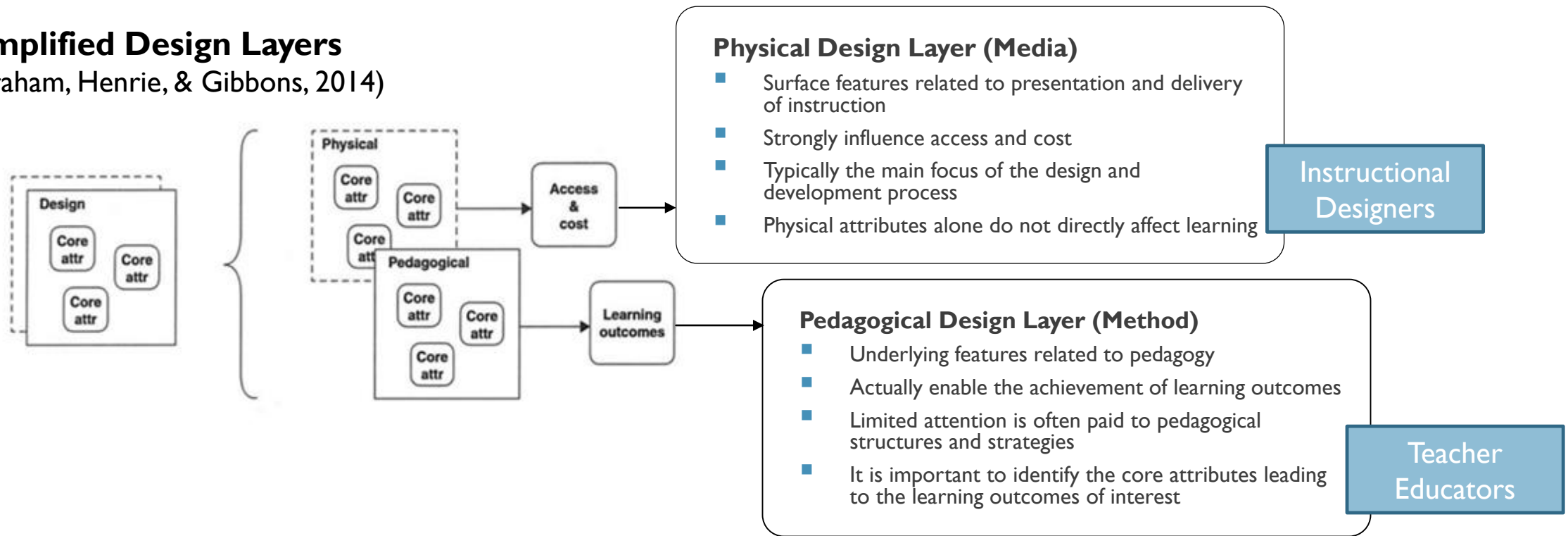
**“My course lacks interactivity and it has no point. I assumed the software would take care of that!”**

# What is required to harness the potential of online education?

## How can we develop innovative learning designs that bring about student success?

### Underlying pedagogical structures and purposes

#### Simplified Design Layers (Graham, Henrie, & Gibbons, 2014)



#### Physical Design Layer (Media)

- Surface features related to presentation and delivery of instruction
- Strongly influence access and cost
- Typically the main focus of the design and development process
- Physical attributes alone do not directly affect learning

Instructional Designers

#### Pedagogical Design Layer (Method)

- Underlying features related to pedagogy
- Actually enable the achievement of learning outcomes
- Limited attention is often paid to pedagogical structures and strategies
- It is important to identify the core attributes leading to the learning outcomes of interest

Teacher Educators

# CONTEXT OF THE STUDY

How can online education contribute to better futures?



**T·E·L·L**  
TEACHING ENGLISH LANGUAGE LEARNERS

Teacher Professional Development



- ✓ Improve access to quality ongoing TPD
- ✓ Change teacher thinking and practices
- ✓ Develop communities of practice
- ✓ Model effective practices

**Effective TPD &  
Sociocultural Approach**

Learner-centered  
Inquiry-based  
Dialogic & Collaborative  
Contextualized  
Practice-oriented

**Online Modality &  
Collaborative Technology**

Access  
Flexibility  
Potential for personalization  
Affords reflective space

# PURPOSE & METHODOLOGY

Uncover the dynamics of aligning technology with pedagogy by reflectively exploring the process of creating a course template during the design of a fully-online instructor-facilitated TPD course grounded in sociocultural practices

## Part of a larger DBR project

- Iterative, integrating research and design, use-inspired and contextually responsive (McKenney & Reeves, 2012)

## Self-Study of Teaching and Teacher Education Practices (S-STTEP)

- Self-initiated disciplined inquiry into one's situated practice with the aim of improving that practice
- Collaborative, reflective, reflexive, and dialogic (Pinnegar & Hamilton, 2009)

## Qualitative Analysis

- Standard qualitative analysis steps and exemplar validation (Miles & Huberman, 2014; Corbin & Strauss, 2008; Maxwell & Miller, 2012)

**What are the core attributes of the design?**  
**What processes enable the alignment of pedagogical and physical layers?**



## Participants

- Researcher/instructional designer, Instructional designer, Senior TEd faculty member
- Instructional design, curriculum development, teacher education, TESL, K-12 teaching experience

## Data

- Nineteen conversations recordings & related artifacts

# FINDINGS: Core Attributes

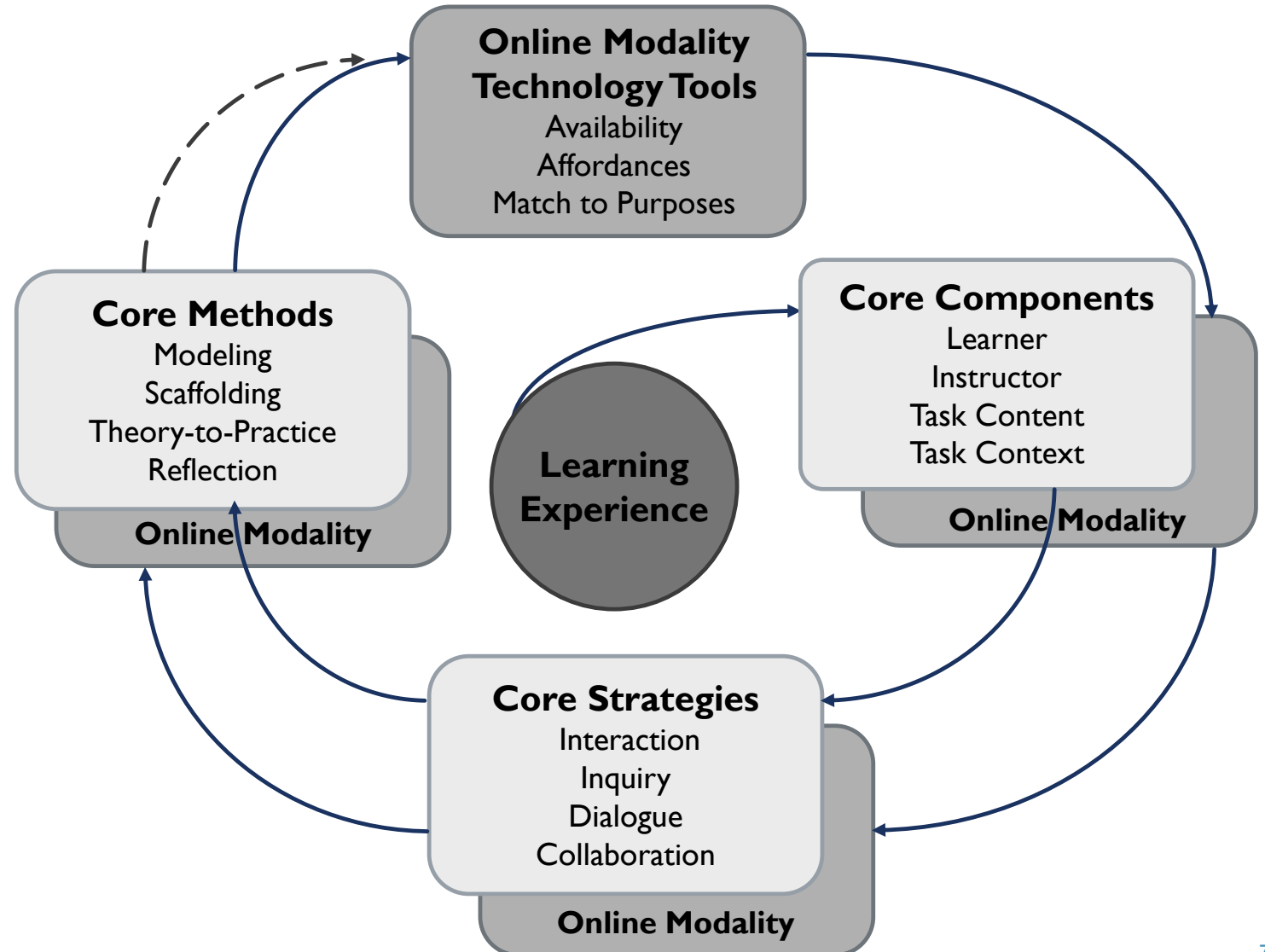
**Aligning pedagogical and physical layers associated with intended learning experiences**

Theme 1	Theme 2	Theme 3	Theme 4	Theme 5	Theme 6
LEARNING EXPERIENCE	CORE COMPONENTS	CORE STRATEGIES	CORE METHODS	QUALITY OF THE DESIGN	LAYERS/ DIMENSIONS
Desired Results Evidence of Learning Instructional Activities	Learner's Response & Needs Instructor's Response & Needs Task Content Task Context	Interaction Inquiry Dialogic Learning Collaboration	Modeling Scaffolding Theory-to-Practice Reflection	Instructor Support Course Feedback Course Evaluation	Pedagogy Technology

# FINDINGS: Alignment Process

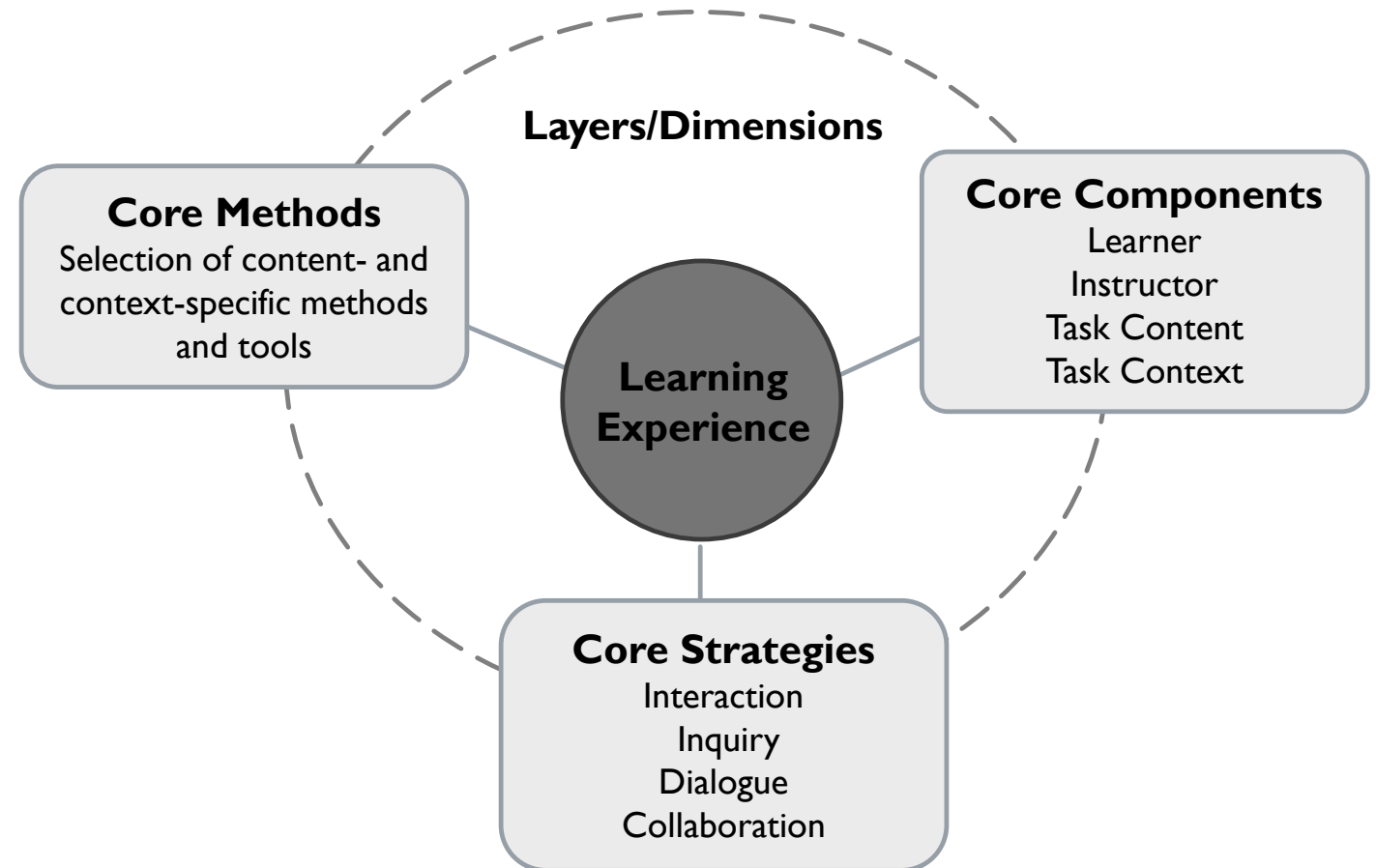
Integration of themes through contiguity-based relationships  
(Maxwell and Miller, 2012)

- Attention to data's temporal and spatial proximity and sequences to uncover additional patterns
- Identify actual connections rather than 'virtual' connections of similarities and differences
- Require identification of relationships among data within its actual context



# DISCUSSION: Pedagogical Intent as a Guiding Principle

- Core attributes leading to desired outcomes
- Attention to learners' experience in a specific context
- Orchestration of core components (Schwab's commonplaces)
- Strategic choices to facilitate key interactions with peers, instructor, and content (Moore, Anderson)
- Intentional selection of content, methods, and tools





# DISCUSSION: Alignment of Pedagogy with Technology

## Attention to Pedagogy

1. Identify core design attributes
2. Establish content, goals & acceptable evidence
3. Propose suitable learning experiences
4. Determine required affordances

## Attention to Technology

1. Identify available technology & tools
2. Determine existing affordances

## Alignment of Layers (Iterative)

1. Design the tasks and learning experiences attending to pedagogical intent
2. Adjust the tools to meet pedagogical needs and purposes
3. Evaluate against core attributes and available technology



*Form follows function*

# IMPLICATIONS TO DESIGN PRACTICE & RESEARCH

## Pedagogical Intent & Alignment Process

- A valuable guiding principle and useful process for aligning pedagogy with technology
- A potential to transform online learning and improve effectiveness of instruction (seeking creative purpose-driven solutions)
- Applicable for varied modalities (online, blended, technology-integrated F2F, and traditional instruction)
- Valuable independently of scale (curriculum development vs. instruction planning)
- Suitable for a variety of content-areas and contexts (professional development in variety of fields and potentially other types of instruction)

## Self-Study of Design Practices

- Highlights the importance of attending to contiguity-type relationships in qualitative analysis, not just similarity-based relationships
- Suggests the need for more reflective and collaborative design practices

# FUTURE DIRECTIONS

- × Explore the efficacy of pedagogical intent and proposed alignment process in designing other courses:
  - Other fully-online TPD courses leading to TELL endorsement
  - Different modalities, contexts, content-areas, audiences, etc.
  
- × Investigate design practices and see how different designers use pedagogical intent and the alignment process in their work

# QUESTIONS AND ANSWERS

**How can you align  
pedagogy with technology  
in your online designs?**

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