

STeLLA Online

Redesigning STeLLA to Increase Reach

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Scaling an Effective Analysis-of-Practice PL Program in Four Contexts

- This presentation is the **second of four in a related paper set**.
- All four projects report the scaling up of a proven professional learning (PL) program but in different contexts and using different approaches.



The Effective PL Program that Is Being Scaled

- STeLLA (Science Teachers Learning From Lesson Analysis)
- Video-based, analysis-of-practice, year-long PL for elementary teachers



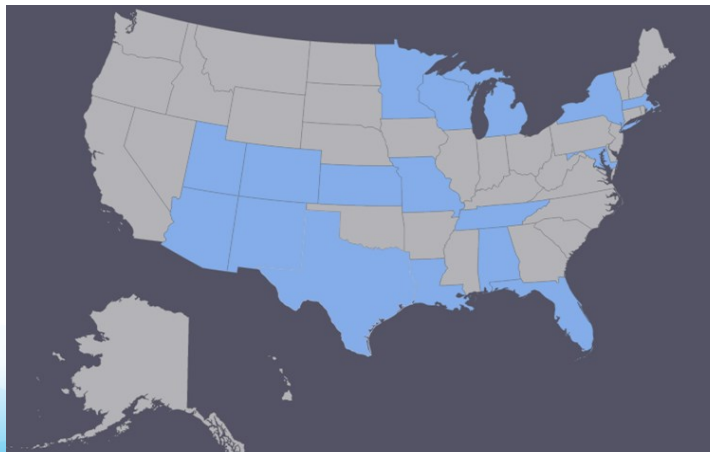
Overview of Session

- Why STeLLA Online?
- What is STeLLA Online?
- Design features of STeLLA Online



Why STeLLA *ONLINE*?

- Eliminates all travel costs (no flights, food, hotel)
- Increases accessibility for
 - teachers in tiny rural districts
 - teachers with summer jobs
 - teachers with small children
- Increases accessibility for teacher leaders
- More equitable access to STeLLA PL



What makes STeLLA Online, STeLLA?

- **STeLLA design principles***
 - We adhere to all design principles
 - Focus on three in this presentation:
 - **Integration** of science content, curriculum, and pedagogy
 - **Collaborative learning**
 - **PL facilitation and leadership development**

*Roth, Bintz, Wickler, Hvidsten, Taylor, Beardsley, Cain, Wilson, (2017). Design principles for effective video-based professional development. *International Journal of STEM Education*, 4(31), p. 1 - 24.



What STeLLA Online *ISN'T*

- Not “do it yourself”
 - Requires a facilitator
- Not a correspondence course
 - Requires group work
 - Requires intensive online interaction



STeLLA vs. STeLLA Online

- Same total duration (~90 hours)
- Intensive summer experience (both)
 - Concentrated (face to face)
 - Spread out (online)
- Video analysis of own classrooms in Fall (both)
- Lesson development in Winter (both)



Question #1

How do we preserve the integration of science content learning with other elements of STeLLA in the online environment?



STeLLA Design Principles: 5, 6, 7

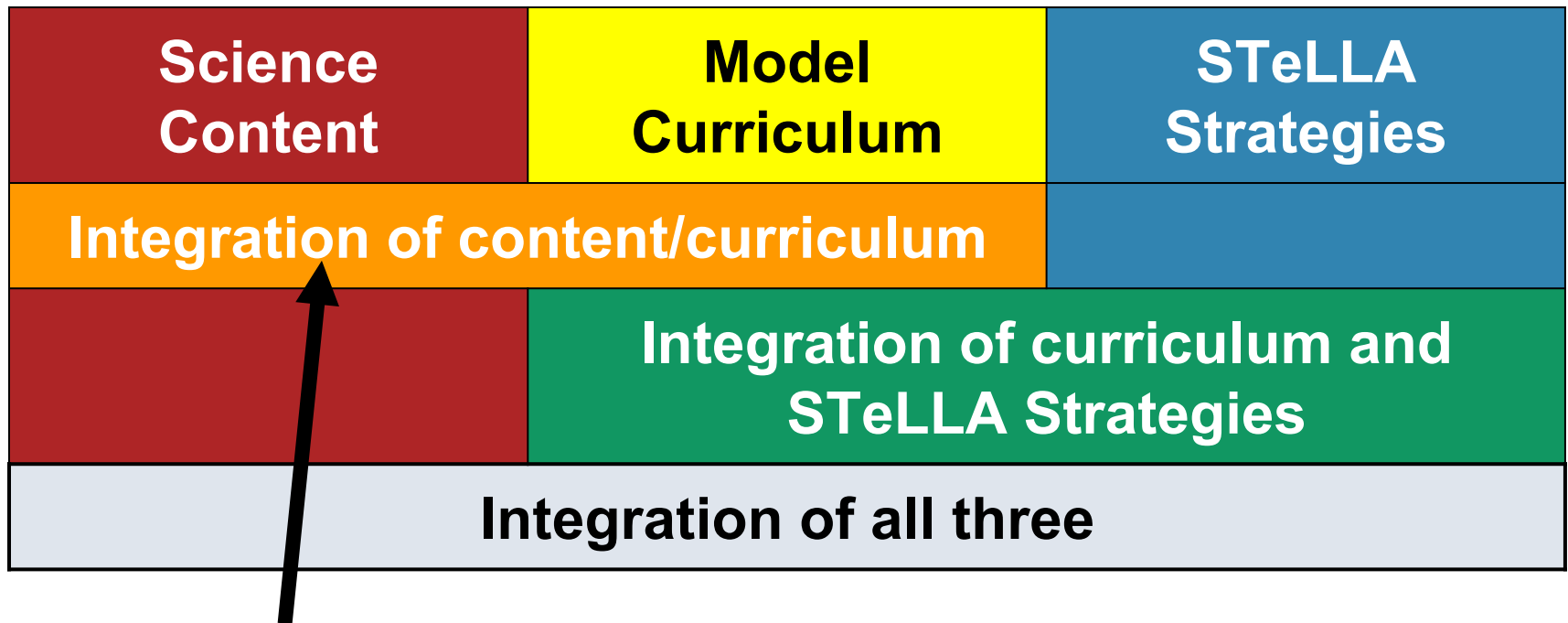
Integration of Learning Experiences

Science Content	Model Curriculum	STeLLA Strategies
Integration of content/curriculum		
	Integration of curriculum and STeLLA Strategies	
Integration of all three		



Design Principles: 5, 6, 7

Integration of Learning Experiences

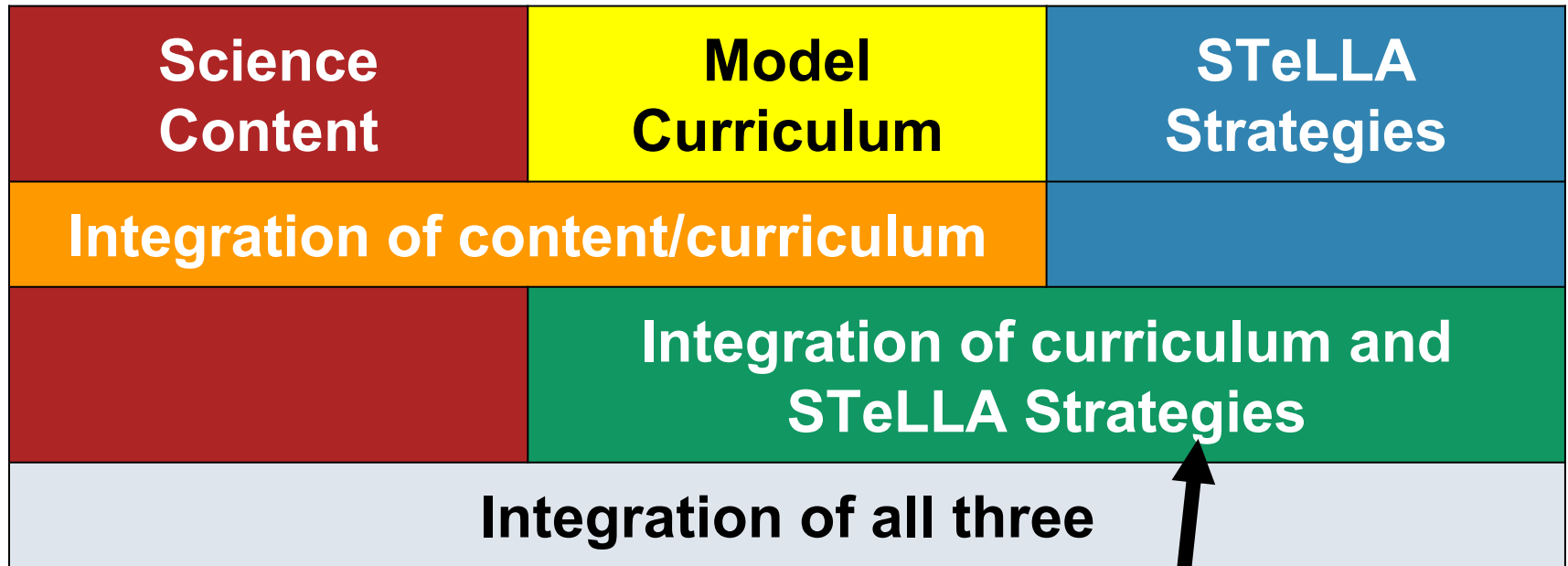


Engaging as learners using science activities that are closely matched to experiences of students in model curricula.



Design Principles: 5, 6, 7

Integration of Learning Experiences

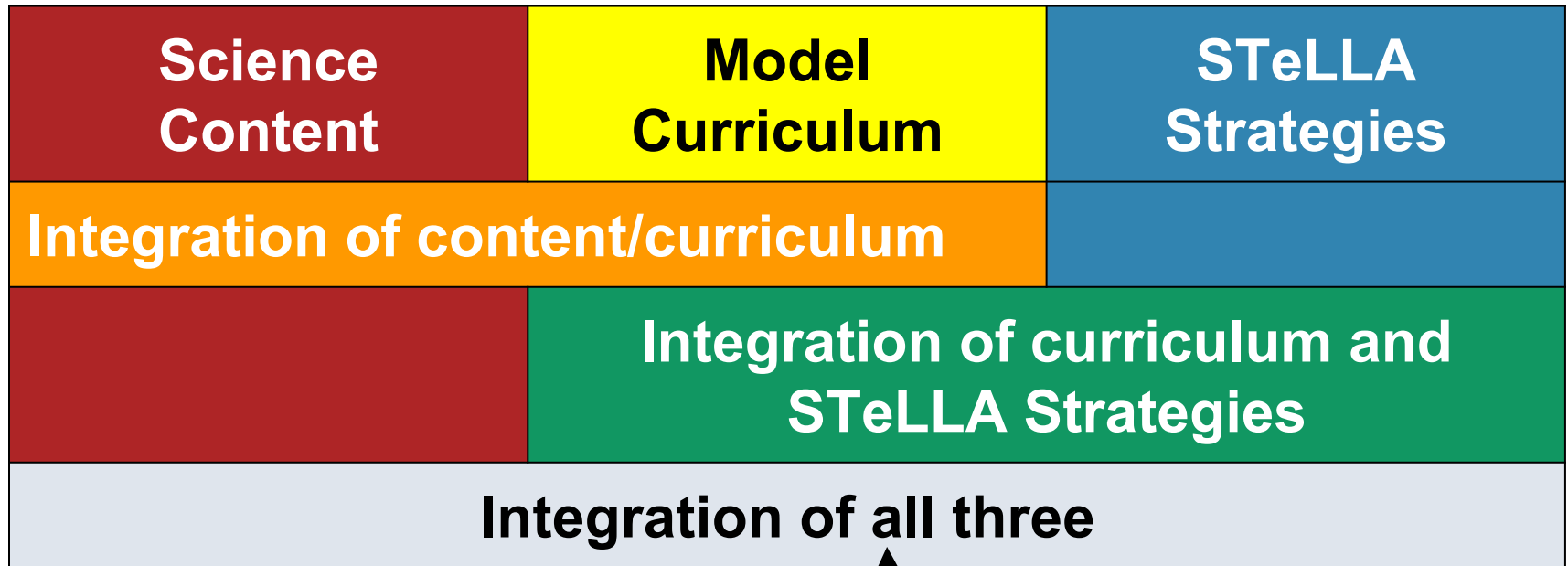


Analyzing model curriculum units for their use of STeLLA Strategies.



Design Principles: 5, 6, 7

Integration of Learning Experiences



Analyze students' science ideas or coherence of a science storyline in video as surfaced through STeLLA strategies as students engage in model units.



Consistent 5-Part Module Structure (Asynchronous)

Learn focal strategies. Read about 2 or 3 strategies, engage in asynchronous discussion, and submit copies of STeLLA Strategies Summary Table.

Engage in science. Engage in curriculum-based science activities (matched closely to model lesson).

- 3. Analyze video.** Analyze video of teacher using focal STeLLA strategies while teaching model lesson.

Use and apply. Teachers consider how they might use the focal strategies to teach science ideas related to the model unit and submit a Canvas assignment or engage in an asynchronous discussion.

- 5. Reflect.** Reflection on science content (driving question board), strategies, and relationship between strategies and lenses.



Consistent 4-Part Synchronous Session

- Check-in (How are you doing, really? ~15 to 20 minutes each synchronous session)
- Discuss strategies
- Analyze videos showcasing curriculum, science ideas, and focal strategies
- Discuss science ideas in greater depth

Question #2

Can we create a collaborative environment that allows teachers to critically engage with one another (be constructively challenging)?



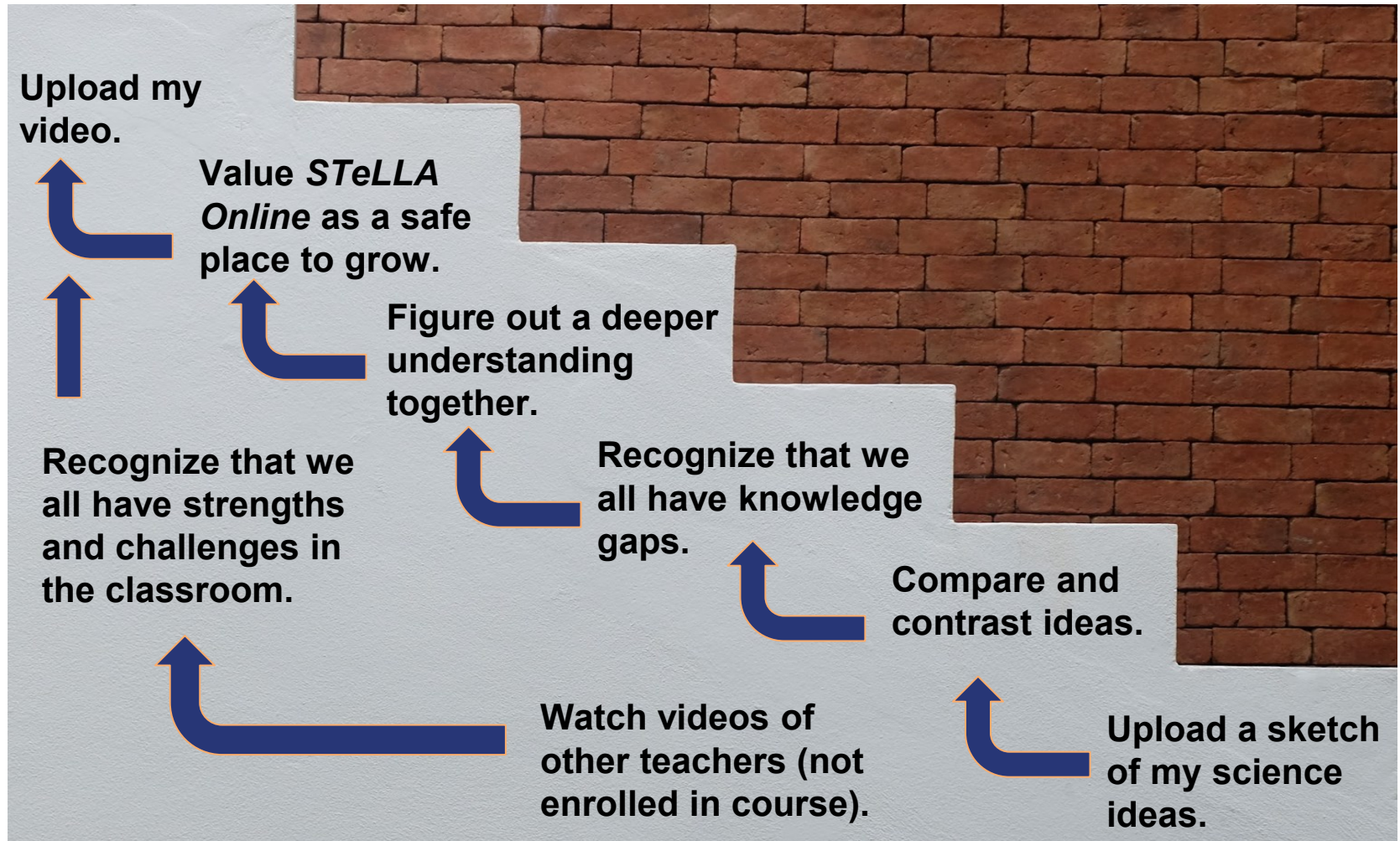
How we created online community

Gradually building community and trust

- Informal conversations
- Initially opening oneself up in lower risk ways to be vulnerable in **asynchronous work**
- Later, **opening oneself up to be vulnerable in synchronous work**



Stair Stepping into Openness and Vulnerability



Question #3

How do we facilitate and develop facilitators for STeLLA Online?



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How do we **facilitate** and develop facilitators for STeLLA Online?



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Role of Facilitator: Face to Face vs. Online

- Reactive in face to face PL
- Proactive in STeLLA Online
 - precious little synchronous time;
 - facilitator needs to come in with a great idea of where challenges lie and what participants fully understand to make the best use of synch time.
- Used generative “crux” questions to uncover common areas of difficulty
 - Science crux questions
 - Pedagogical crux questions



Question #3

How do we facilitate and **develop facilitators** for STeLLA Online?



Leadership development

- Includes real side-by-side facilitation learning
- Much more coaching in real time (based on asynchronous responses between synchronous sessions) than is humanly possible in face to face
- Tacit is made explicit



Summary

STeLLA Online attended to three STeLLA Design principles:

- Integration
- Collaboration
- Facilitation

Results from quasi-experiment to examine impact are coming!



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