

Collaborative Research: Synchronous Online Video-Based Development for Rural Mathematics Coaches [SyncOn for Coaches]

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Purpose

The goal of the project is to support mathematics coaches in rural contexts to improve their ability to (a) facilitate productive planning and debriefing conversations with teachers; (b) notice salient coaching practices and their impact on teachers' thinking; and (c) use evidence of teacher learning to make decisions about their own coaching practices. We implemented a three-part professional development model that included (a) an online course on content-focused coaching; (b) one-on-one video-based coaching cycles with a Mentor Coach; and (c) an online video club in which practicing coaches reflected on dilemmas of practice and the impact of coaching moves, using evidence from their own coaching.

Research Goals

- We identified two primary research goals, which are to study how an online model professional development model can:
- Support coaches to:
 - interact productively with teachers in a content-focused coaching cycle;
 - notice and respond to teachers' thinking; and
 - use evidence of teacher learning to make decisions about coaching practices.
 - Be adapted to other contexts that may face resource, capacity, and logistical constraints.

The funding is for \$2.8 million and focuses on approximately 30 coaches in either New York or Idaho. The project is in the second year.

Select Presentations & Publications

Amador, J., Choppin, J., Callard, C., Carson, C., Kruger, J., Gillespie, R., Martin, S., Hanan, A. (2022). Coaches' noticing before, after, and during video clubs. Proceedings for the 44th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Nashville.

Amador, J., Choppin, J., Callard, C., Carson, C., & Gillespie, R. (2021). Synchronous online video-based professional development for rural mathematics coaches. Proceedings for the 43rd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education, Philadelphia.

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Research Questions

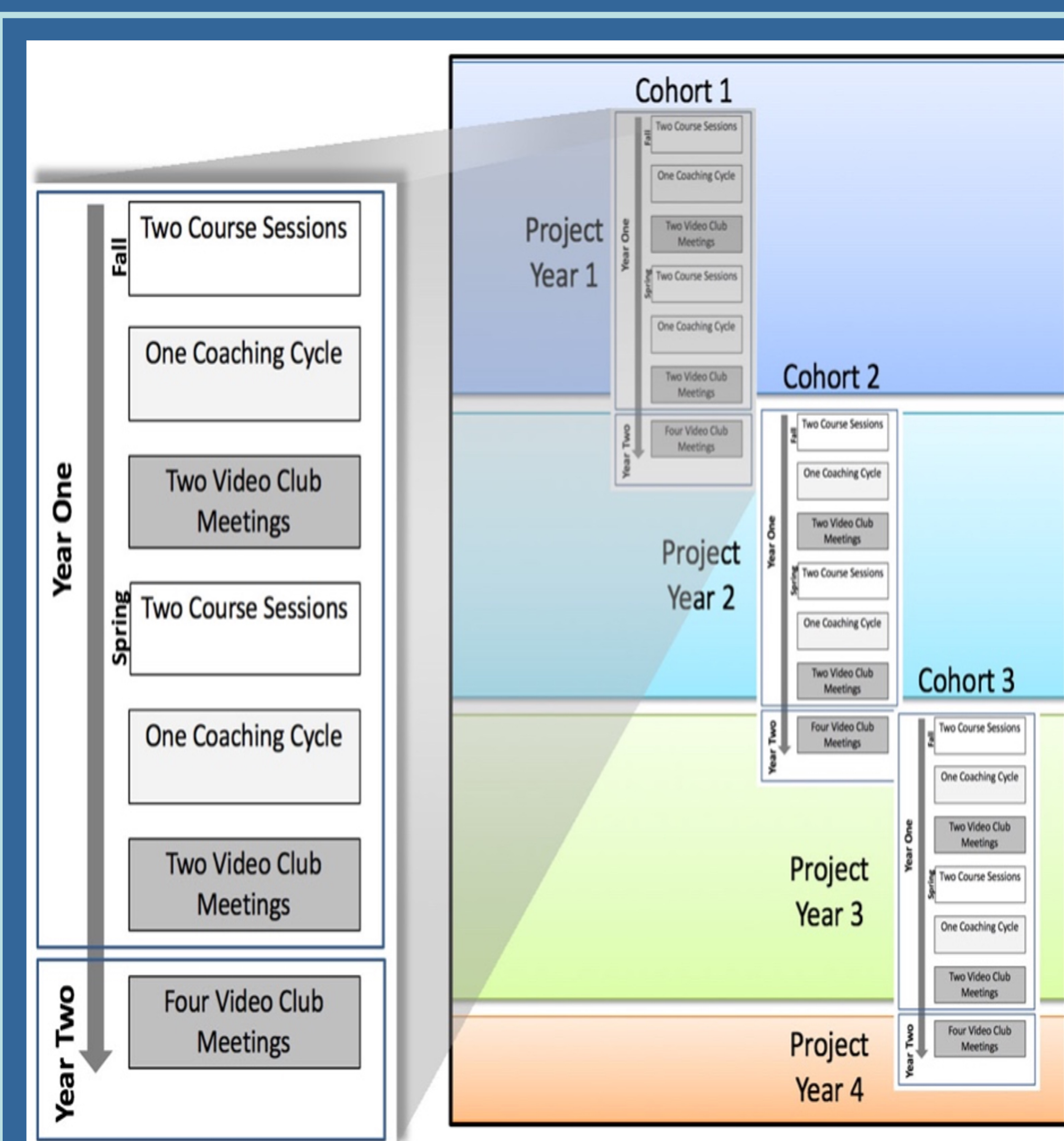
Addressing Goal 1

- How do the nature and content of coaches' contributions evolve across the multiple components of the model?
 - How do these contributions evolve over the four sessions of the online course?
 - Do the Coach Participants contribute in ways that demonstrate more substantive content and more direction related to their growth?
 - How do the one-on-one coaching discussions evolve over time?
 - How do the annotations of the coaching cycles change over time?
 - How do the practices in the video club meetings evolve over time?
 - How does the role of the Lead Mentor Coach evolve?
- How are the contributions in one part of the model associated with those from other parts of the model?
 - To what extent is the vocabulary and framing from the online courses evident in participants' contributions in the online coaching and video club meetings?
 - To what extent are the coaching conversations from online coaching evident in subsequent online course sessions and video club meetings?
 - To what extent are the discussions from the video club meetings evident in the subsequent online course sessions and online coaching interactions?

Addressing Goal 2:

- The following questions stipulate how we will explore our goals related to how an online video-based model can be adapted to other contexts that may face resource, capacity and logistical constraints.
- What resources (e.g., time, logistics, skills) are required to enact the three-part model?
 - What are technology constraints related to the model in terms of availability of software and hardware and internet access and connectivity?
 - What resources and guidance are required for the sustainability of the video clubs after the participants are no longer part of the project?

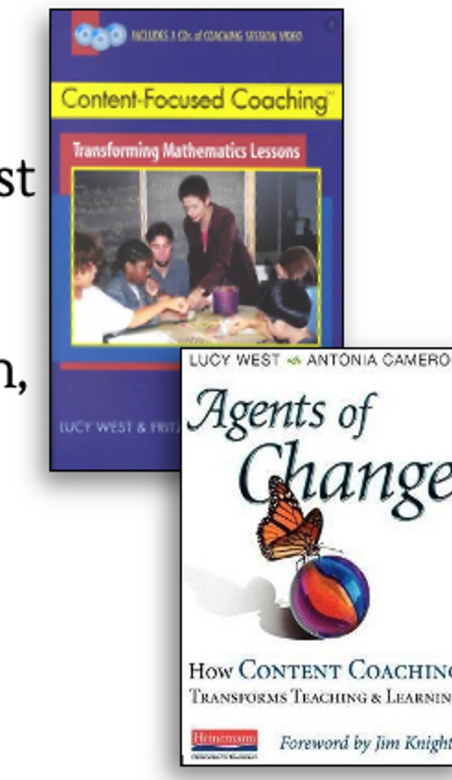
Project Events



Main PD Components

Content-Focused Coaching Online Course

- The work in the course is based on *Content-Focused Coaching: Transforming Mathematics Lessons* (West & Staub, 2003) and *Agents of Change: How Content Coaching Transforms Teaching and Learning* (West & Cameron, 2013)
- The 8-hour course consists of four, two-hour synchronous online sessions and asynchronous independent work between sessions.



Video Clubs

Video Coaching Club Goals

- Grow in our ability to make sense of coaching moves and teacher thinking by noticing and naming interesting moments in a planning conversation
- Grow our personal capacity to facilitate content-focused planning conversations with teachers
- Grow our collaborative community of coaches through rich conversation about authentic coaching moments

Online Coaching Cycle

"Coaching the Coach" Cycle

Activity	Who's Involved	Timeline
Introductory Meeting between Mentor Coach and Participant Coach (Cycle 1 only) (recorded by MC)	Mentor Coach and Participant Coach	
Preparation Activities: complete the Preparation Activities (document and upload to the Google folder) to share with your Conversation	Participant Coach	
Pre-Cycle Conversation (recorded by MC)	Mentor Coach and Participant Coach	
Participant Coach facilitates coaching cycle with teacher (planning, lesson implementation, and debriefing) and records planning and debriefing conversations	Participant Coach and Teacher	
Participant Coach uploads recordings to Swirl Library and notifies Cynthia Carson via email (Carson@warner.rochester.edu)	Participant Coach	
Participant Coach views planning conversation recording and selects 3-5 min clips; annotates selected clips; uploads any coaching artifacts to shared Google folder; communicates with Mentor Coach at least 48 hours before debriefing conversation	Participant Coach	
Mentor Coach views and annotates selected clips and reviews coaching artifacts	Mentor Coach	
Debriefing Conversation to reflect on the planning conversation between Participant Coach and Teacher using artifacts and annotations (recorded by MC)	Mentor Coach and Participant Coach	

Current Data Analysis Projects

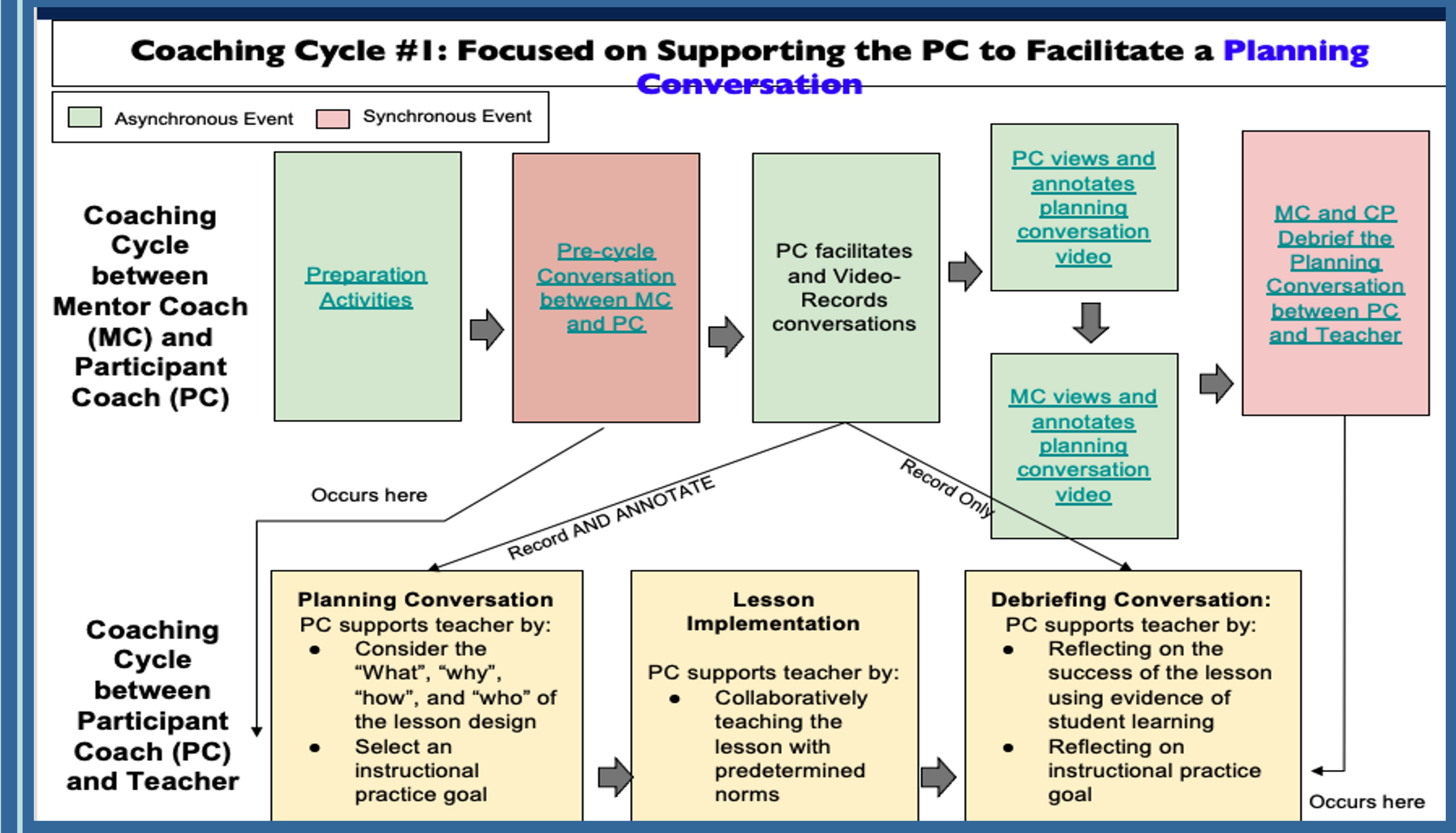
Video Coaching Club Analysis

- Rationale of Clip Selection for Video Coaching Club Videos
- Video Coaching Club Facilitation Analysis
- Video Coaching Club Discussion of Video Clips

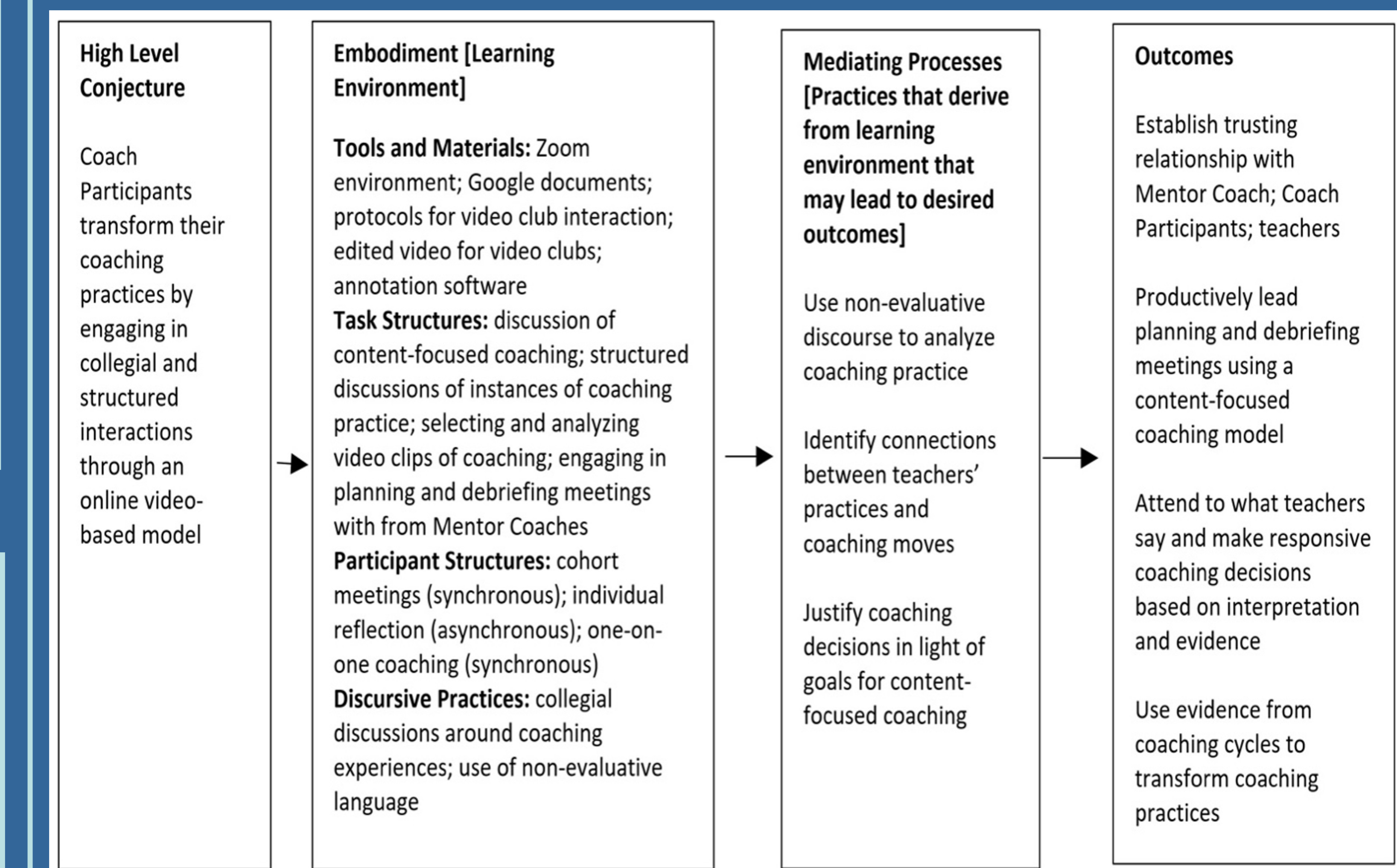
Coaching Cycle Analysis

- Analysis of coaching cycle conversations between Mentor Coaches and Coach Participants
- Coach Participant and Teacher Planning Transcripts and Videos

Coaching Cycle



Conjecture Map



Synchronous Online Space Technology

