

Part 2: Enacting Lesson Study

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Definition of the PLO: Lesson study (LS) is a collaborative practice-based approach to learning that can be used to improve teachers' and teacher candidates' thoughtful implementation of high leverage practices (HLPs). First developed in Japan, LS engages preservice teachers and/or practicing teachers in a "cyclical process of collaborative planning, enactment and observation of instruction, and reflection within small peer groups" (Roberts et al., 2018, p. 238). The LS process helps preservice teachers and practicing teachers engage in critical discourse about their instruction and its impact on student learning with the intention of improving it. Studies of the LS process in preparation and professional development (PD) have shown that it can be useful in improving teachers' knowledge (Chassels & Melville, 2009; Juhler, 2016); instructional practice (Chizhik et al., 2017); and student achievement (Gersten et al., 2010; Gersten et al., 2014). Additionally, strategic use of planning and lesson reflection tools seem to enhance the quality of the LS process by supporting the quality of teachers' discourse about teaching and student learning (Kostas, Galini, & Maria, 2014).

Description of the PLO: Dr. Kristen Arnold at Whitworth University uses LS to support her candidates' ability to implement five HLPs in an elementary and secondary practicum experience. These HLPs include (a) Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes (HLP#6); (b) Collaborate with professionals to increase student success (HLP#1); (c) Systematically design instruction toward a specific learning goal (HLP#12); (d) Adapt curriculum tasks and materials for specific learning goals (HLP#13); and (e) Use explicit instruction (EI; HLP#16). Knowledge of these HLPs is taught through Part 1 of this PLO. Part 2 of the PLO helps candidates learn to implement LS.

Over a six-week period, candidates are placed in small peer groups. First, candidates learn about the LS process. Next, they participate in each sequential stage of LS. To prepare for the LS process, candidates learn to gather and review formative and summative K-12 student assessment data to plan instruction (HLP#6). Then, they collaborate with their peers to discuss the data (HLP#1), develop a learning goal based on that data (HLP#12), and plan a lesson in which EI will be used to achieve the lesson goal (HLP#12 and HLP#16). While planning the lesson, they adapt curriculum tasks and materials as needed to support the target K-12 student (HLP#13). Once they collaboratively plan the lesson, each candidate teaches an EI lesson while recording it. After the lesson, candidates debrief about the lessons to assess the impact of instruction on student learning (HLP#6) and propose revisions.

Context for the PLO:

The LS process is taught in an accelerated master's in teaching program for preservice general educators. As described in the video presentation, LS is embedded in a course on differentiated instruction (DI) for both elementary and secondary candidates. The course on DI follows a foundational course focused on exceptional learners taught the previous semester. In summer,

candidates learn about special education services, 13 federally recognized disability categories, the Individualized Education Program (IEP) process, and the inclusive teacher's role in providing access to the general education curriculum for students with disabilities. In the fall, candidates spend two full days per week in K-12 practicum settings under the supervision of a general education mentor. To fulfill requirements for the differentiation course, candidates are expected to meet synchronously once a week and complete reading and performance-based assessments outside of class meeting times.

Stage 1: Prepare for Lesson Study

What is this stage about?

In this stage, candidates learn about the LS cycle and its alignment with previously studied HLPs. Candidates prepare to enact the LS by taking specific steps within their practicum placement.

How does the instructor implement this stage?

Step 1: *(During class)* The instructor presents an introduction to LS using the HLP Lesson Study Overview presentation ([Resource A](#)). The instructor also explains how the LS cycle is aligned with previously learned HLPs and sets clear expectations for collaborative work within lesson study teams (LSTs) by sharing the LST meeting protocols. The instructor then organizes candidates into LSTs based on similar grade levels and/or content areas.

Step 2: *(During class)* The instructor guides candidates in downloading and copying their own version of the HLP eWorkbook ([Resource B](#)), ensuring that each candidate can access the material. Then, each LST member grants eWorkbook access to each peer on their team and the instructor using a shared link. The instructor also informs candidates where and how to upload video recordings of their lessons using the agreed-upon video storage system and ensures that videos can be shared privately for the purpose of peer and instructor feedback (e.g., GoReact, V-Note, MediaShare).

Step 3: *(After class)* Candidates complete the Prepare section (pp. 2-3) of the eWorkbook. Candidates collaborate with their mentor to jointly decide when the lesson will be taught within the five-week window, determine the curriculum that will be used, and acquire video permission forms from K-12 students ([Resource C](#)). Candidates also determine the target K-12 student (or students) they want to focus the lesson on, selecting (a) the whole class, (b) a small group, or (c) an individual student. The instructor reviews the preparation section of the eWorkbook to ensure completion and provide feedback.

Materials and resources used to implement Stage 1

Resource A: [Lesson Study Overview Presentation](#)

Resource B: [Lesson Study eWorkbook](#)

Resource C: [Video Permission Form](#)

Questions other faculty/PD providers might have when implementing this PLO

How much time do candidates need to spend outside class to implement the LS?
Candidates spend approximately one week of instructional time (three hours of student engagement in a three [3]-credit course) for each phase of the LS PLO. Time may be spent on discussions, lesson development, and collaboration. Instructors may instruct candidates that their first implementation of LS may take longer than three hours, as expected times will be more accurate with subsequent implementations of the PLO.

Stage 2: Use Student Assessment Data

What is this stage about?

Candidates utilize a classroom screening protocol to review student assessment data. They practice making data-based instructional decisions about target K-12 students, content, and methods of delivery.

How does the instructor implement this stage?

Step 1: Candidates gather student formative and summative assessments and determine what percentage of their class(es) are struggling. They bring the assessments and data from them to class.

Step 2: (During class) With instructor guidance, candidates complete the Use Data section in the eWorkbook ([Resource B](#)).

Step 3: Candidates also determine the target K-12 student (or students) they want to focus the LS on, selecting (a) the whole class, (b) a small group, or (c) an individual student. Instructor reviews the Use Data section of the eWorkbook to ensure completion and provide feedback.

Materials and resources used to implement Stage 2

Resource B: [Lesson Study eWorkbook](#)

Questions other faculty/PD providers might have when implementing this PLO

What if permission forms are not easily attainable?

Technology has proven to be a flexible tool in this scenario. Google Forms can serve as a digital method of obtaining permission that has increased response rates in previous LS cycles. Candidates also have the option to film themselves only in the classroom using their smartphones; this option is important when K-12 student permission is difficult or impossible to obtain. GoReact has been a

helpful video documentation tool, as candidates can focus the camera on themselves and not the K-12 students. Language describing LS can also be included with other program clearance forms so, K-12 students and families are not required to submit multiple forms.

What if the number of candidates does not allow for groups consisting of three peers?

Dr. Arnold uses knowledge about her candidates and their placements to group them in LSTs. Ideally, elementary candidates would be grouped according to grade level, and secondary candidates would be grouped by content area. If the numbers do not allow for cohesive groups of three, she adjusts groups based on candidate social rapport, regardless of content area or grade level. It is often more advantageous to group candidates based on social rapport, as some have expressed hesitancy in having their video-taped instruction analyzed by a peer group. Because the central focus of LS is on implementing EI, it is not necessary for candidates to be in homogenous groups. This variation of LS allows for flexible grouping, but it is not advised that candidates have more than three to an LST due to time involved in reviewing and reflecting on lessons later.

Stage 3: Collaborate and Plan

What is this stage about?

In this stage, candidates draft their EI lesson plans and put their collaboration skills into practice by providing constructive peer feedback. They incorporate elements of EI into their lesson plan and receive instructor feedback.

How does the instructor implement this stage?

Step 1: (*Before class*) Candidates draft a clear learning goal using the ACCOMPLISH frame in the eWorkbook ([Resource B](#).)

Step 2: (*During class*) Instructor reviews the LST Meeting Guide: Facilitator Checklist #1 section of the eWorkbook (Page 7, [Resource B](#)) and models the role of a peer facilitator. One member from each LST elects to be a facilitator of the planning meeting. This team member should download the LST Facilitator Checklist #1 ([Resource D](#)). Candidates then spend about 30 minutes collaboratively engaged in LST Meeting #1: Plan and Conduct a Group Self-Assessment to ensure each item in the meeting was addressed. In addition, they type comments directly into their team members' eWorkbooks to provide constructive feedback.

Step 3: (*After class*) Following the meeting, candidates independently draft a lesson using the Explicit Instruction Template and the Adaptation Checklist in the eWorkbook ([Resource B](#), page 9).

Step 4: (*During class*) When class convenes again, the instructor reviews guidelines and the checklist for LST Meeting #2: Planning for Explicit Instruction ([Resource B](#), page 10). A new peer facilitator directs the LST planning meeting, which takes approximately 60-80 minutes. They conduct a group self-assessment to ensure each item was addressed using Facilitator Checklist #2: Planning for Explicit Instruction ([Resource E](#)).

Step 5: (*After class*) Following the meeting, candidates incorporate peer feedback in the lesson plan and submit to the instructor for review. Instructor uses the Key Elements of Explicit Instruction Checklist to provide feedback to candidates individually (See [Resource F](#)).

Materials and resources used to implement Stage 3

Resource B: [Lesson Study eWorkbook](#)

Resource D: [LST Facilitator Checklist #1](#)

Resource E: [LST Facilitator Checklist #2](#)

Resource F: [Key Elements of Explicit Instruction Checklist](#)

Questions other faculty/PD providers might have when implementing this practice

Can any lesson planning template be used?

Yes, if prompts are included that cause candidates to think about how to incorporate elements of EI.

Is the collaboration and planning time and location flexible?

Yes, depending on the frequency and time that candidates can meet either in person or virtually, this protocol can be used flexibly. The time noted above was the time allotted for the course, and candidates were able to address each item on the checklist for each team member, but many have expressed feeling rushed. Programs or PD personnel may wish to extend this time.

Stage 4: Teach and Record

What is this stage about?

In this stage, candidates teach and record the lesson on video. They may choose to film the entire lesson, keeping in mind that they will upload 25:00 for their LST members and instructor to view.

How does the instructor implement this stage?

Step 1: (*During class*) The instructor reviews Tips for Using Video to Improve Teaching in the eWorkbook ([Resource B](#), page 11) and provides guidance for any technical difficulties that may arise.

Step 2: (*After class*) Candidates teach and record the lesson on video and upload the film to the appropriate LST viewing folder.

Materials and resources used to implement Stage 4

Resource B: [Lesson Study eWorkbook](#)

Candidate Recording Device

Video Viewing Folder/Virtual Storage Space

Stage 5: Review and Reflect

What is this stage about?

Candidates review their own teaching video, as well as their LST members' videos, conducting a brief analysis of each.

How does the instructor implement this stage?

Step 1: (*During class*) The instructor reviews the Self-Reflection Matrix ([Resource B](#), page 12) and the Meeting Guide for Peer Facilitators: LS Facilitator Checklist #3 ([Resource G](#)), emphasizing HLP focus items to look for during the review process. Specifically, candidates will observe the outcome of addressing individual learning differences, identifying and prioritizing learning goals, systematically designing instruction, and adapting tasks and materials. They will reflect on these HLPs and apply insight from their review to create a plan for extending effective practices or changing ineffective practices in future lessons.

Step 2: (*After class*) Candidates review their own videos, completing the Self-Reflection Matrix. They then access their peers' videos and note how and to what extent the LST member provided K-12 students with opportunities to respond by observing 25:00 of each peer's lesson.

Step 3: (*After class*) Instructor reviews each candidate's lesson using the Explicit Instruction Observation Tool ([Resource H](#)).

Materials and resources used to implement Stage 5

Resource B: [Lesson Study eWorkbook](#)

Resource G: [LST Facilitator Checklist #3](#)

Resource H: [Key Elements of Explicit Instruction Lesson Observation Tool](#)

Video Viewing Folder/Virtual Storage Space

Questions other faculty/PD providers might have when implementing this practice

What about the extensive time it takes for the instructor to review each candidate's lesson on video?

Faculty could enlist the help of a university supervisor or cooperating teacher to view and analyze the video using the same rubrics provided. Candidates can also use these lessons for benchmark observations in methods courses, and

supervisors who have been trained in the elements of EI would be ideally helpful for viewing the videos. Another option would be to assemble a departmental review team, which is also a good opportunity to streamline performance-based assessments across departments and enlist help from content specialists. If you are the sole instructor with no teacher's assistant, it is also possible to assess shorter clips of the lesson, focus solely on timestamps, or speed up the playback time.

What are some virtual storage space options that are easily accessible to LST members and faculty/evaluators?

Google Classroom and GoReact are two options that provide ample virtual storage. Edthena is also a viable option and is FERPA compliant. A more advanced tool for video analysis that does not include a storage option is the Classroom Teaching Scan, developed by Michael Kennedy, Wendy Rogers, and John Romig in the Curry School of Education at the University of Virginia.

Stage 6: Debrief the Lesson

What is this stage about?

After the lesson review is complete, candidates engage in a final debrief to assess the impact of instruction on student learning and propose plans for improved teaching and learning.

How does the instructor implement this stage?

Step 1: (*During class*) Instructor reviews expectations for collaboration in Meeting #3: Debrief. Candidates discuss questions and prompts led by a different peer facilitator than the previous two meetings for about 60-80 minutes. The instructor concludes with general performance feedback for the class and next steps.

Step 2: (*After class*) Instructor finalizes HLP LS grades within the eWorkbook according to the scoring rubric ([Resource B](#), page 17).

Materials and resources used to implement Stage 6

Resource B: [Lesson Study eWorkbook](#)

Questions other faculty/PD providers might have when implementing this practice

What opportunities do the candidates have to engage in a subsequent LS cycle?

LS is most effective when multiple iterations can be completed. If possible, coordinate with colleagues to see where multiple cycles can occur across methods and content courses.

Definition readings and other readings for those interested in learning more about LS and video analysis

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Takahashi, A., & Mcdougal, T. (2016). Collaborative lesson research: Maximizing the impact of lesson study. *International Journal on Mathematics Education*, 48(4), 513-526.