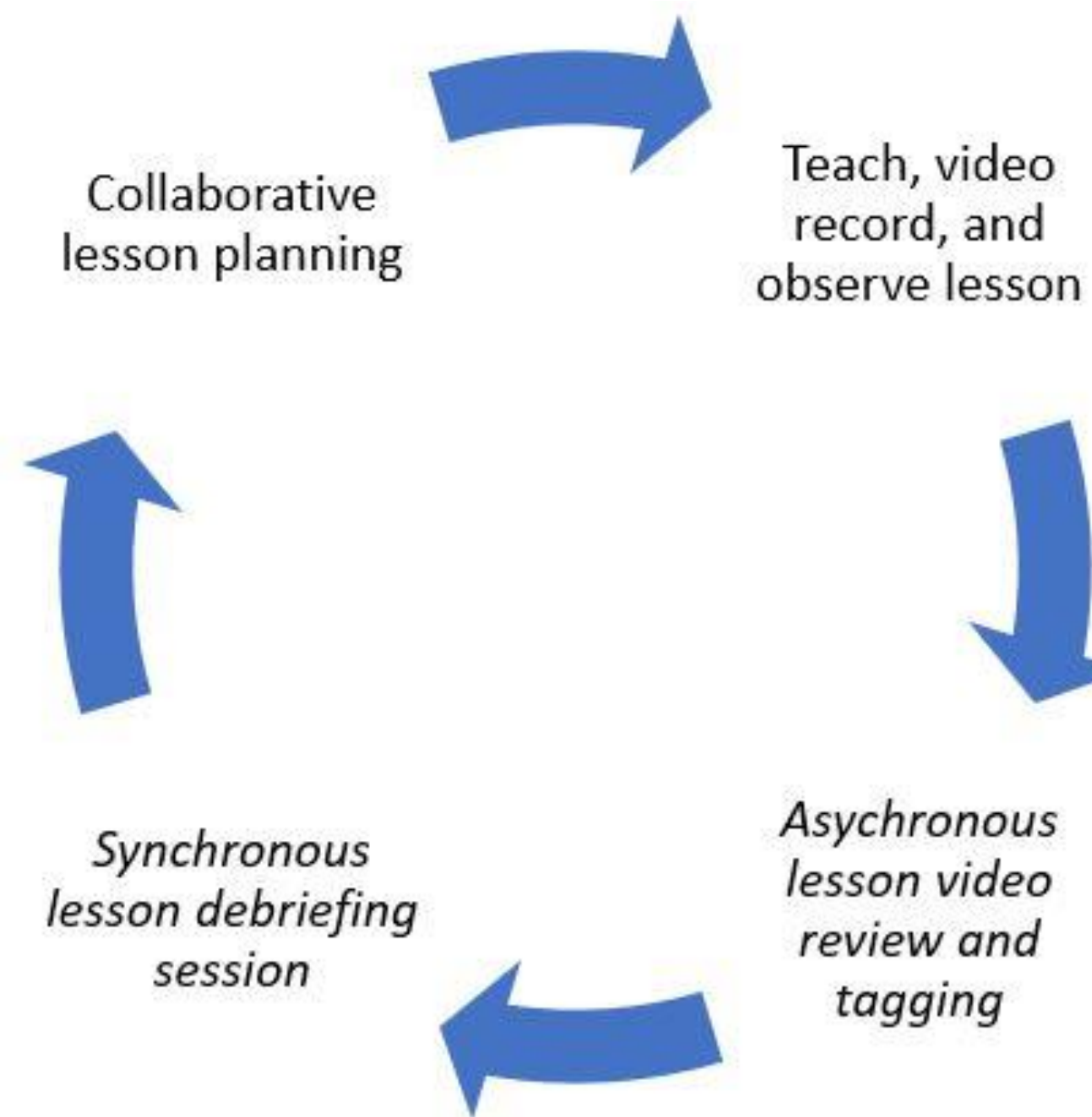


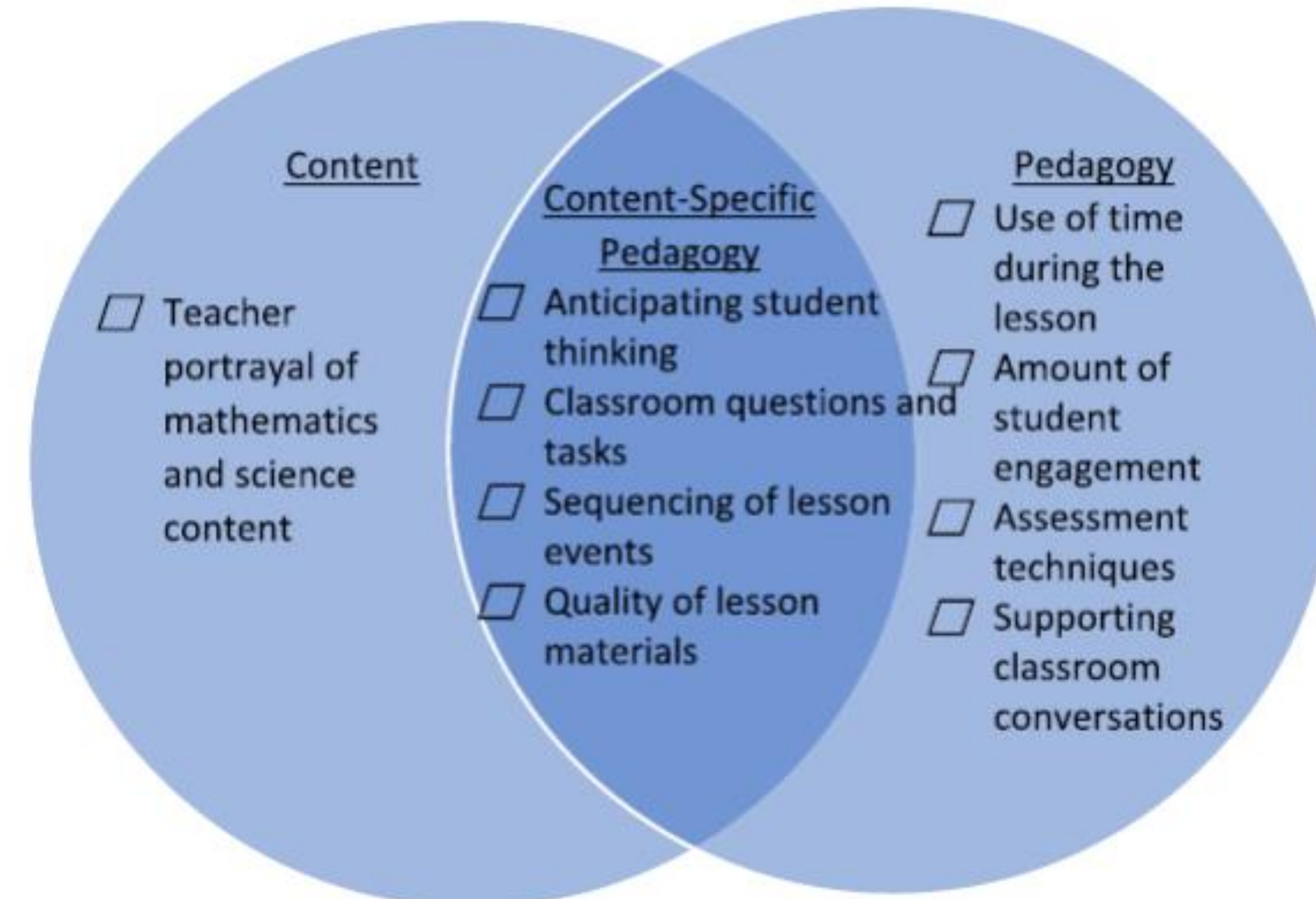
Preservice Collaborative Reflection: Japanese Lesson Study (Lewis et al., 2009) as a Noyce Activity

Lesson Study Cycle



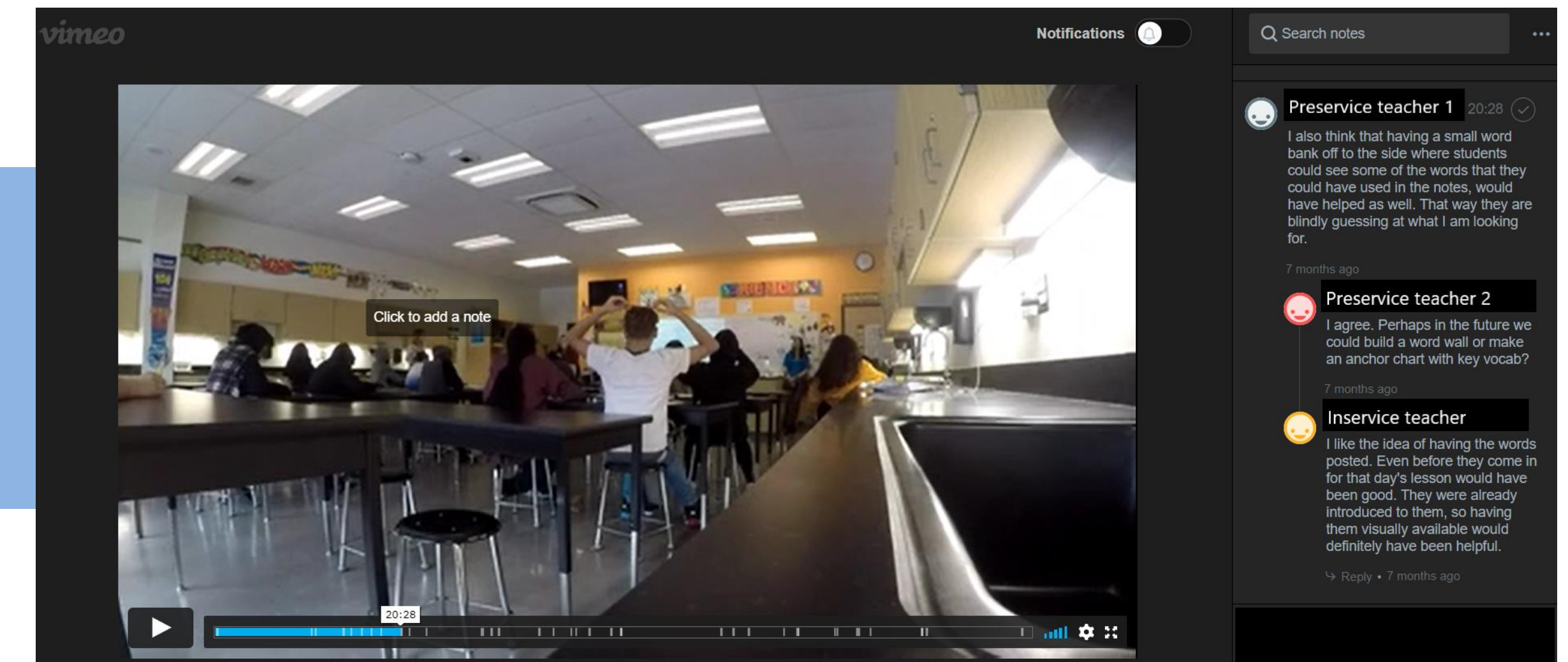
Participants: *Inservice Lesson Study Mentor Teachers, Noyce Scholars, Noyce Interns, and University Faculty Members*

Synchronous Debriefing Sessions



Salient conversational themes observed during lesson study debriefing sessions

Asynchronous Analysis and Discussion of Lesson



Lesson Study Survey (Akiba et al., 2019) Results

Descriptive Statistics for Lesson Study Survey Data: Scholars (Fall, 2022)

Lesson Study Feature/Dimension	Noyce Scholars	
	<i>M</i>	<i>SD</i>
Design Features: Student Thinking ^a	5.44	0.50
Design Features: Active Participation ^a	5.63	0.45
Design Features: Material Quality ^b	3.61	0.43
Effective Inquiry Processes ^b	3.86	0.22
TLO: Knowledge Growth ^a	5.42	0.46
TLO: Self-Efficacy ^a	5.68	0.38
TLO: Expectation ^a	5.46	0.53

Note. *M*=mean. *SD*=standard deviation. ^aScores are based on a 6-point scale. ^bScores are based on a 4-point scale.

Inservice Collaborative Reflection: Noyce Induction Activities

Reformed Teaching Observation Protocol (RTOP; Sawada et al., 2002) Discussions and Reflections

The Reformed Teaching Observation Protocol (RTOP) is an observational instrument that can be used to assess important elements of mathematics or science instruction. It is based on the recommendations and standards for the teaching of mathematics and science that have been promulgated by professional societies of mathematicians, scientists, and educators.

RTOP Sample Reflection 1

My mentor and I met after my lesson to talk about the pros and cons of this lesson. One thing that worked during this lesson was the partner activity. During on of my activities, students were given a partner. One partner had to be the scribe and the other had to be the presenter. Assigning roles allowed students to be accountable for their learning. My mentor and I discussed how I should continue assigning roles to increase accountability and student engagement. One thing I need to improve is reviewing the learning targets and success criteria for the lesson. It is important that students are making connections between the lessons and their learning. This conversation allowed me to develop as a professional because I was able to reflect on the importance of students knowing the why a skill works just as much as the how as the skill is applied.

RTOP Sample Reflection 2

During my pre observation conference, the topic of classroom management was discussed. A majority of my classes are well behaved, but I am struggling with one period in particular. This class has many IEP/504 students, and it's also my largest class. My observer instructed me to teach like I normally would teach on a normal day, and she would give me feedback on that afterwards. During the post conference we talked about different classroom management strategies I could try. A lot of my behavioral issues are actually issues I need to discipline students for, so that is the feedback that my mentor gave me. Other than that, she stated that I could try other engagement strategies when asking whole class questions. Such as, having students talk to a table partner or doing a round robin type of discussion. Overall, I would say that this observation helped me a lot in terms of classroom management. Being that this has helped me, I would agree that it has enhanced my professional development as a teacher.

Descriptive Statistics for RTOP Dimensions for Both Lessons (Fall 2022)

RTOP Dimension	Both Lessons		Lesson 1		Lesson 2	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Lesson Design and Implementation	3.99	0.55	3.95	0.63	4.06	0.50
Lesson Content: Propositional Knowledge	4.35	0.61	4.14	0.76	4.50	0.42
Lesson Content: Procedural Knowledge	3.81	0.85	3.67	0.96	3.85	0.75
Classroom Culture: Communicative Interactions	3.86	0.80	3.84	0.87	3.88	0.85
Classroom Culture: Student-Teacher Relationships	4.22	0.62	4.16	0.62	4.29	0.70

Note. *M*=mean. *SD*=standard deviation. Across dimensions, items were measured on a 5-point scale ranging from 1-Never Occurred to 5-Very Descriptive.

Summary of RTOP scores assigned to Noyce Scholars by school-based mentors

Venture/Vexation Journals and Discussions (Ellis et al., 2017)

Venture/vexation journal 1

In this space, briefly (approximately 150-200 words) describe either a venture (something new you would like to try this month) or a vexation (a challenging situation). We will use some of your ventures and vexations as starting points for online discussions

Venture/vexation reflective journal prompt completed every other month throughout the academic year; responses serve as starting points for collaborative, asynchronous discussions among Noyce Scholars

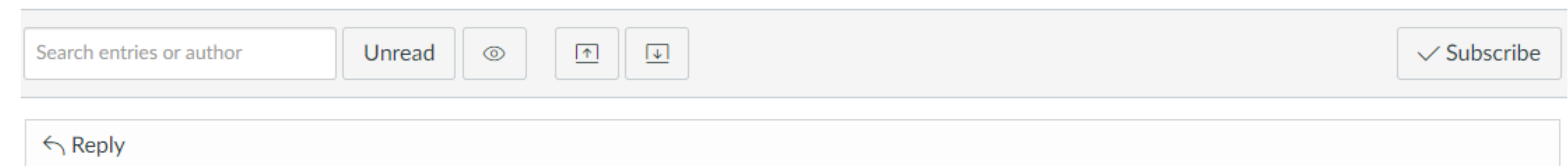
Venture/Vexation discussion 1

Read this description of a venture/vexation from one of your cohort members:

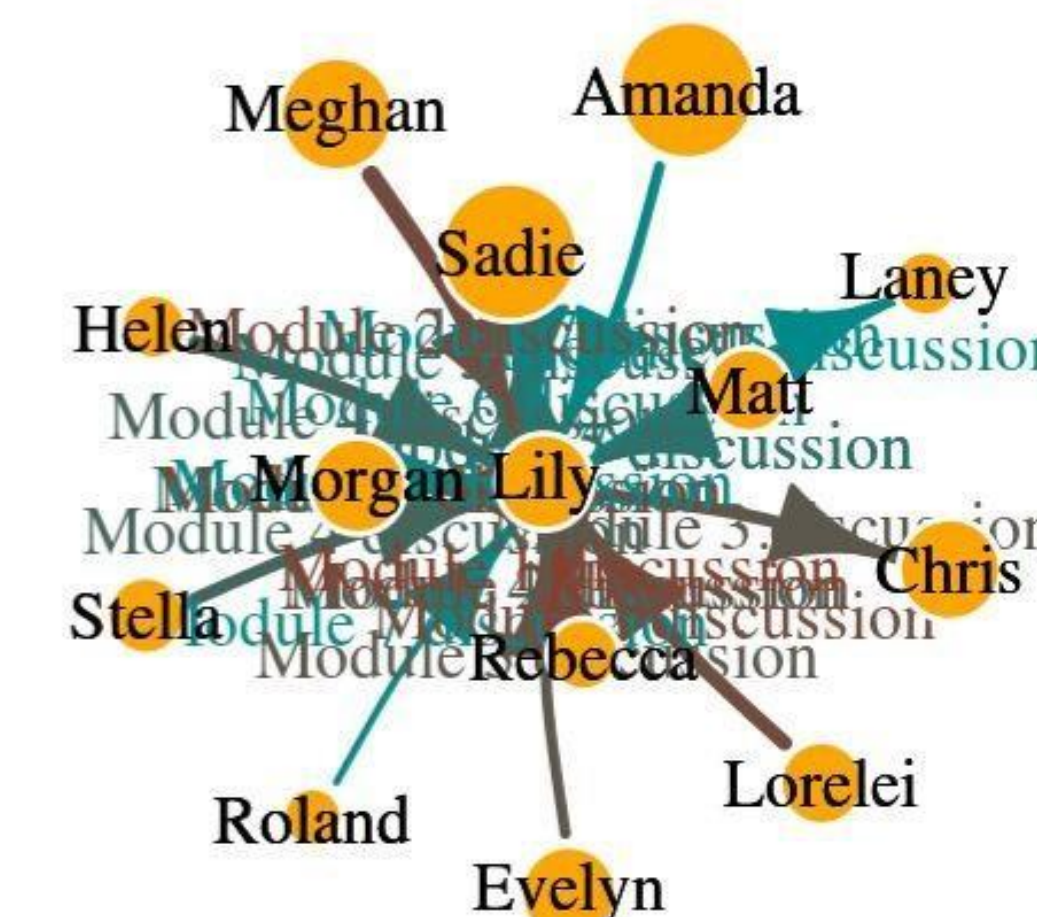
During my first month of teaching, I have already found myself in a couple challenging situations. One of the classes I have been teaching this semester is an intervention class for lowest level math students in 7th grade. Throughout the first two and a half weeks of school, I have found it challenging to plan and differentiate for these students because their math levels vary tremendously. While doing activities in class, a few students will be done by the time I'm finished passing out the worksheets and most others students will have little understanding of the topic at hand, even with the support of an aid and myself. These situations have often led to behavior issues around the classroom, as the fast finishers are bored; however I have had success with asking these students to help teach the slower working students and have found that students learning from other students can be just as effective as teacher to student teaching.

Read the venture/vexation description above and ask clarifying questions as needed. The person who wrote the venture/vexation can respond to each of the questions.

Respond to the venture or vexation above with feedback or suggestions. You may then also choose to describe your own related ventures or vexations and ask for feedback from others about them.



Sample venture/vexation whole-group discussion prompt



Social network diagram depicting a Noyce Scholar's asynchronous interactions with others

References

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Ellis, J., Polizzi, S. J., Roehrig, G., & Rushton, G. (2017). Teachers as leaders: The impact of teacher leadership supports for beginning teachers in an online induction program. *Journal of Technology and Teacher Education, 25*(3), 245-272.

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Sawada, D., Piburn, M. D., Judson, E., Turley, J., Falconer, K., Benford, R., & Bloom, I. (2002). Measuring reform practices in science and mathematics classrooms: The reformed teaching observation protocol. *School science and mathematics, 102*(6), 245-253.