

APPENDIX: Pairs in the PHAS and EOAS departments, 2013-2016: Overview and Results from Interviews and Classroom Observations.

Department, Course Level	New Instructor	Experienced Instructor	Course curriculum with active learning already existed?	Stated intention to use active learning in future courses (from interviews and reflections)	Evidence of adoption of active learning by New Instructor
PHAS, 1st-year course	Brand-new faculty member; no experience in active learning (<i>Instructor A</i>)	Highly experienced in active learning	Yes	<i>Yes, [I continued to use all the same strategies when I taught the course again the following year]. I didn't change... the material remained exactly the same¹.</i>	Taught same course again three times; continued using active learning* [‡] . Introduced worksheets to an upper-year course [†] .
PHAS, 1st-year course	Fairly inexperienced instructor	Highly experienced in active learning	Yes	<i>Yeah, I think, most definitely [my teaching philosophy has changed from these paired-teaching experiences][‡].</i>	Taught 1st-year courses using active learning every semester since, including creating teaching activities [†] . Served as <i>Experienced Instructor</i> in two subsequent pairs.
PHAS, 1st-year course	Significant teaching experience in labs; new to active learning in lecture courses	Highly experienced in active learning	No. New course: <i>Experienced Instructor</i> led creation of curriculum, with help from <i>New</i>	<i>If I were going to do this course again I would probably do something that was more lecture, but that incorporated lots of sort of interactive elements—that definitely used clicker</i>	One year later, same instructors pair-taught same course again. Revised curriculum, continuing to use active learning*

			Instructor	<i>questions and some problem solving on the part of the students, but that was structured a bit more lecture-like.</i>	
PHAS, 1st-year course	Significant teaching experience; fairly new to active learning (Instructor B)	Highly experienced in active learning	Yes	<i>... this sort of worksheet-, more interactive-type of thing ... I will try it out in other contexts ... I'll do [Course I] exactly the same [way as while paired-teaching] ... For the upper-level class [Course II] ... I will try to see if I can develop guided, basically guided worksheets.</i>	Taught same course again one year later; continued using active learning ⁺ Incorporated worksheets in an upper-year course ⁺
PHAS, 1st-year course	Significant teaching experience; fairly new to active learning (Instructor C)	Highly experienced in active learning	Yes	<i>[Teaching methods from paired teaching that I anticipate taking into my next courses include] in class ... thinking about students working in groups as opposed to individually, so structuring, perhaps, problems with that in mind. ... [In an upper-level course,] the basic approach would probably be the same ... that philosophy of students ... work in groups and they have to explain to each other</i>	Taught same course again one year later; continued using active learning ⁺
PHAS, 1st-	Significant teaching	Significant teaching	Yes	<i>If and when I would do a</i>	No evidence of

year course	experience; fairly new to active learning	experience; moderately experienced in active learning		<i>course like this again ... I would make more effort—I would make efforts to make sure that the course was structured in a way that they [the students] had something to do every lecture.</i>	subsequent teaching
PHAS, 1st-year course	Significant teaching experience; fairly new to active learning	Significant experience with active learning; previously taught in a pair as less experienced member	Yes	<i>I'm going to be teaching [pair-taught course] again in the fall, and I think I will continue doing worksheet-like things.</i>	No information available
EOAS, 1st-year course	Brand-new faculty member; no experience in active learning	Highly experienced in active learning	Yes; New Instructor designed some new activities	<i>In [my upper-year class], we did a lot of in-class worksheets. I leaned on my experience in [the paired teaching course] for that. In two courses, I did surveys at the beginning and middle of class to see what students wanted to get out of class. I developed a lot of interactive labs, like a 10-minute lecture at the beginning, modelled after [a class given by Instructor E].</i>	Incorporated some activities from this class into two other classes* ‡
EOAS, 1st-year course	Brand-new faculty member; no experience in active learning	2 Experienced Instructors; Both highly experienced in active learning ⁴	Yes; New Instructor developed some new activities	<i>Yes, I'm continuing to use these activities in my class because I saw last year how they worked well for the students... and I am making</i>	Taught same course again one year later; continued using active learning* ‡

				<i>new [activities] as well.</i>	
EOAS, 1st-year course	Brand-new faculty member; minimal experience in active learning	2 <i>Experienced</i> Instructors; Both with some experience in active learning ⁴	No; Instructors developed new activities throughout the term	<i>[Next time I teach this], I'd allocate more time to go through the worksheet in proper detail, including giving more time for the students to try to figure it out on their own in the first place.</i>	Incorporated some activities from this class into a subsequent, different class*
EOAS, 1st-year course	Experienced teacher; minimal experience in active learning	Highly experienced in active learning	Yes	<i>I am now overhauling my course to almost remove lectures....Students will be working on what interests them rather on existing tutorials.</i>	Redesigned an upper-year course to incorporate active, student driven learning*
EOAS, 2nd-year course	Experienced teacher; minimal experience in active learning	2 <i>Experienced</i> Instructors; Both highly experienced in active learning ⁴	Yes	<i>Some activities, like role-playing, I would use again in my lower-level classes.</i>	Incorporated a role-playing activity into a different lower-year class*
EOAS, Graduate course	Graduate student; some experience in active learning	Highly experienced in active learning	Yes; Instructors developed several new sessions	<i>This is the way I was taught to teach, and I see how effective it is, so I'll definitely continue using active learning.</i>	No evidence of subsequent teaching
EOAS, 1st-year course	Highly experienced in active learning	Highly experienced in active learning	Yes; Instructors developed some new activities	<i>[This session] needs to be more interactive...Maybe next time suggest that students actually use the</i>	Taught same course again one year later; continued using active learning and modifying some sessions to be

				<i>Web of Science during the presentation, instead of just showing it to them.</i>	more active*
--	--	--	--	--	--------------

Notes:

¹All *New* instructors adopted active learning during the paired-teaching term*.[‡]

²Due to the timeline of this project, this interview took place 18 months following paired teaching.

³Due to the timeline of this project, this interview took place 7 months following paired teaching.

⁴Several pairs in EOAS had two *Experienced* Instructors, rather than one.

Data from: * Interview results; [‡] Classroom observations using COPUS; [†] Informal conversation with instructor.