



IBL ON THE MOVE

Evaluation Report: Year 1 of PRODUCT Traveling Workshops

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Summary

In their initial year, the PRODUCT traveling workshops are meeting project goals to provide exposure and to develop interest in IBL teaching and further professional development. To date, these workshops are reaching a pool of instructors who have less prior exposure to IBL and teach in different types of institutions compared to those in intensive workshops. Women are very well represented, and instructors of color are better represented in this audience.

Evaluation Methods

Evaluation data were collected from four traveling workshops held from September 2017 through June 2018 (Table 1). Facilitators show a slide with a URL and QR code that link to the post-workshop survey, and people complete it on their personal device before they leave the workshop site. We encourage response with a drawing for a gift certificate, and by collecting names and emails for an AIBL mailing list. About 80% of respondents enter the drawing and about 70% join the email list. This evaluation strategy is quick and viable in most settings.

Response rates are higher when facilitators can e-mail a reminder link to participants, but in many cases they do not have the contact information to do this. Likewise, we do not use pre-surveys, because it can be difficult to get this information in advance and we do not want to deter people from deciding to participate last-minute. Instead, we use retrospective self-ratings to assess changes in participants' knowledge, skills, beliefs and interest related to IBL teaching. For similar practical reasons, total attendance is based on facilitator estimates, not registration data.

Table 1: Characteristics of the Traveling Workshops and the Survey Data Set

	workshop min	workshop max	total	mean
Workshop length	2 hours	1.5 days		
Number of participants (est.)	14	35	82	
Number of survey responses	7	22	51	
Survey response rate (est.)	50%	90%		60%

Workshop sites include two AMATYC regional meetings, one MAA Section NExT meeting attached to an MAA section meeting, and one math department. Because the workshop settings,

durations and audiences vary a good deal, we summarize overall data trends and do not separate by workshop. Each facilitator team received data from their workshop as formative feedback. We have also initiated (with mixed success) post-workshop discussions on the project-wide facilitator email list, to learn from each other and to document facilitators' experiences.

Overall this simple evaluation approach is working well to provide useful data about the traveling workshops, and it is not effortful for evaluators or facilitators to administer. In the future, when the samples are larger, we will compare the results with those for the four-day intensive workshops; to do so now, based on a small set of workshops, may be misleading.

Evaluation Results: Participation

This year the traveling workshops have reached instructors with a different profile than those in the four-day intensive workshops (Tables 2-3). They reported less background in IBL, though many described prior interest and experience with other active learning approaches. Many participants came from two-year colleges, and many held non-tenurable positions. Reaching these groups is a specific goal of the traveling workshops and so far this goal is being met.

Table 2: Instructional Profile of Traveling Workshop Participants

Ever taken an IBL class?	18% yes	82% no		
Ever taught an IBL class?	33% yes	67% no		
Institution type (by highest degree offered in math)	50% 2YC	34% 4YC	12% MS-granting	4% PhD-granting
Career stage (TT=tenure-track)	18% TT/untentured	24% TT/tenured	43% nonTT	2% grad stu 14% other

As in the four-day workshops, women form a greater proportion of the audience than their presence among the mathematics professoriate at large. To date the workshops are reaching a slightly greater proportion of instructors who are people of color than do four-day workshops.

Table 3: Personal Demographics of Traveling Workshop Participants

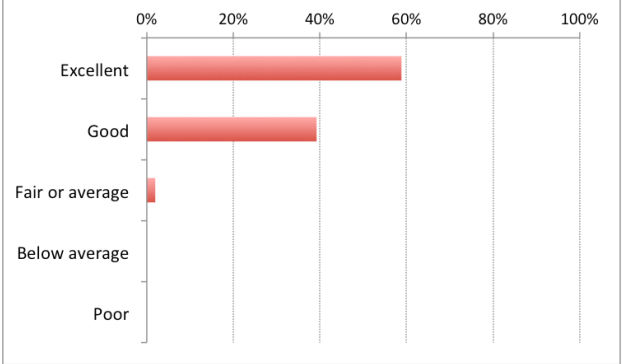
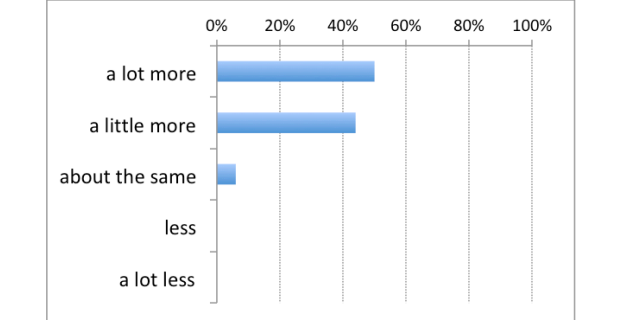
Gender	54% women	46% men	
US citizens, nationals, permanent residents	98% yes	2% no	
Ethnicity: Hispanic or Latina/o	8% yes	86% no	6% decline to state
Race (* indicates that the count includes people indicating multiple racial groups)	73% white 14% Black or African-American** 2% Asian 4% American Indian or Alaskan Native** 0% Native Hawaiian 8% decline to state		

To assess how the workshops are reaching instructors from groups underrepresented in STEM, we use US Census categories; people can mark multiple categories. Because whiteness is privileged in US society, multiracial people are more likely to be treated by others as people of color.¹ Thus the count of white people includes only those who indicated ‘white’ as their sole racial category, while the counts for people of color include those who indicated multiple racial categories. We are standardizing this intersectional approach across workshops, so that demographics can be directly compared among data sets.

Evaluation Results: Participant Outcomes

We assess the workshops with two multiple-choice items (Table 4). Participants rated the overall quality of the workshop on a 5-point scale, and they rated themselves in five areas of knowledge, skills and attitudes, as compared to their status before the workshop. These questions are similar to the gains items answered by four-day workshop participants, and we will compare responses later when larger sample sizes for both workshop groups are available.

Table 4: Workshop Outcomes

Item	Distribution of responses	mean												
Overall workshop quality (4=excellent to 0=poor)	 <table border="1"> <caption>Data for Overall Workshop Quality</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Excellent</td> <td>60%</td> </tr> <tr> <td>Good</td> <td>35%</td> </tr> <tr> <td>Fair or average</td> <td>5%</td> </tr> <tr> <td>Below average</td> <td>0%</td> </tr> <tr> <td>Poor</td> <td>0%</td> </tr> </tbody> </table>	Category	Percentage	Excellent	60%	Good	35%	Fair or average	5%	Below average	0%	Poor	0%	3.57 (max 4)
Category	Percentage													
Excellent	60%													
Good	35%													
Fair or average	5%													
Below average	0%													
Poor	0%													
Please rate yourself NOW as compared to before the workshop. (+2=a lot more, +1=a little more, 0=about the same, -1= less, -2=a lot less)														
knowledge of IBL teaching methods	 <table border="1"> <caption>Data for Knowledge of IBL Teaching Methods</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>a lot more</td> <td>50%</td> </tr> <tr> <td>a little more</td> <td>45%</td> </tr> <tr> <td>about the same</td> <td>5%</td> </tr> <tr> <td>less</td> <td>0%</td> </tr> <tr> <td>a lot less</td> <td>0%</td> </tr> </tbody> </table>	Category	Percentage	a lot more	50%	a little more	45%	about the same	5%	less	0%	a lot less	0%	1.44 (max 2, min -2)
Category	Percentage													
a lot more	50%													
a little more	45%													
about the same	5%													
less	0%													
a lot less	0%													

¹ DiAngelo, R. J. (2016) *What does it mean to be white?: Developing white racial literacy*. New York: Peter Lang.

skill in inquiry-based teaching	<table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>a lot more</td> <td>15%</td> </tr> <tr> <td>a little more</td> <td>75%</td> </tr> <tr> <td>about the same</td> <td>10%</td> </tr> <tr> <td>less</td> <td>0%</td> </tr> <tr> <td>a lot less</td> <td>0%</td> </tr> </tbody> </table>	Response	Percentage	a lot more	15%	a little more	75%	about the same	10%	less	0%	a lot less	0%	0.98 (max 2, min -2)
Response	Percentage													
a lot more	15%													
a little more	75%													
about the same	10%													
less	0%													
a lot less	0%													
belief in the effectiveness of IBL teaching method	<table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>a lot more</td> <td>40%</td> </tr> <tr> <td>a little more</td> <td>40%</td> </tr> <tr> <td>about the same</td> <td>20%</td> </tr> <tr> <td>less</td> <td>0%</td> </tr> <tr> <td>a lot less</td> <td>0%</td> </tr> </tbody> </table>	Response	Percentage	a lot more	40%	a little more	40%	about the same	20%	less	0%	a lot less	0%	1.14 (max 2, min -2)
Response	Percentage													
a lot more	40%													
a little more	40%													
about the same	20%													
less	0%													
a lot less	0%													
interest in learning more about IBL teaching	<table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>a lot more</td> <td>55%</td> </tr> <tr> <td>a little more</td> <td>30%</td> </tr> <tr> <td>about the same</td> <td>15%</td> </tr> <tr> <td>less</td> <td>0%</td> </tr> <tr> <td>a lot less</td> <td>0%</td> </tr> </tbody> </table>	Response	Percentage	a lot more	55%	a little more	30%	about the same	15%	less	0%	a lot less	0%	1.42 (max 2, min -2)
Response	Percentage													
a lot more	55%													
a little more	30%													
about the same	15%													
less	0%													
a lot less	0%													
interest in incorporating IBL methods into my own teaching	<table border="1"> <thead> <tr> <th>Response</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>a lot more</td> <td>55%</td> </tr> <tr> <td>a little more</td> <td>30%</td> </tr> <tr> <td>about the same</td> <td>15%</td> </tr> <tr> <td>less</td> <td>0%</td> </tr> <tr> <td>a lot less</td> <td>0%</td> </tr> </tbody> </table>	Response	Percentage	a lot more	55%	a little more	30%	about the same	15%	less	0%	a lot less	0%	1.46 (max 2, min -2)
Response	Percentage													
a lot more	55%													
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The data indicate that the traveling workshops are succeeding in their goals to provide knowledge and to generate interest in IBL. We hope this interest will materialize further as traveling workshop alumni attend a longer workshop in the future, or participate in other IBL activities. We will monitor future intensive workshops for evidence of such participation.

As expected, and as is also true for the four-day workshops, reported growth in knowledge and interest exceeds growth in skills: the short workshop duration means that there is not time to

develop and practice concrete skills. But it is encouraging that participants perceive some skill gains, perhaps because they gained workable ideas for how to handle specific student situations or address IBL-specific teaching challenges that were discussed in the workshop. In general the workshops are also strengthening participants' beliefs in the effectiveness of IBL, which may also motivate instructors to develop their IBL teaching further.

Open-ended comments on the workshop commonly mention certain features of the workshops, noting that the workshop was well-organized, the presenters “practiced what they preach” by using active learning strategies, and the content was applicable and well chosen, with practical examples and candid responses to questions. Comments also often acknowledge that the presenters were attentive to including everyone and provided chances for peer to peer conversations.

The most common complaint about the workshop is that the time was too short to really dig in. This is exactly where we want to leave participants! The traveling workshops are intended to serve as an “on ramp” to the intensive workshops—to provide exposure to IBL and to draw people into further interaction with the IBL mathematics education community. In Year 1, the data suggest the project is accomplishing these goals.