

PTRA Director's Report
WM17
Prepared by Karen Jo Matsler

The director and Oversight Committee Chair, Pat Callahan, spent a considerable amount of time preparing and responding to the AAPT review of PTRA. This process included several steps. The first step was to compose a 5-page self-study outlining the mission, history, strategic plan, successes, improvements needed, and overall satisfaction with the program. Preparation of this document quite a challenge considering the rich and long history of PTRA alone could be at least 5 pages. This document was submitted in October of 2016 and was subsequently given to an external review committee. The external review committee interviewed the PTRA director, oversight chair, EO, and others that had interests in PTRA which resulted in an addition 16 questions from the external committee to be addressed by the director. The formal external review committee report was presented to the director and oversight chair in January and responses to that report were submitted to Mary Moguee a few days before the W17 conference. The AAPT review board met on Sunday to discuss the findings and recommendations of the report, but those will not be given to the AAPT board until Tuesday. Therefore, the reports, findings, and recommendations cannot be made public at this point.

As director, I have also been working on increasing our presence on the web and in social media. These efforts have led to development of ways to keep more accurate records. A temporary solution for documentation now includes: 1) A survey for PTRAs to record information regarding upcoming workshops that can be posted on the web. This information is also posted on the aapt.org website and 2) setting up QR codes and surveys that facilitate/expedite the collection of information regarding the impact of workshops (diversity, gender, satisfaction, implementation, etc.)

The social media presence is a more difficult problem, mainly because it is hard for workshop leaders to collect pictures and post while doing the workshop! However, we are improving in awareness of what needs to be done and even if it is done after the workshop, most workshops are now posted on the website.

The participant and workshop information now being collected has been valuable in assessing our strengths and areas we need to improve. We are doing a pretty good job in helping AAPT members and members of the physics community at section meetings and state science meetings. However, we are not being very successful in securing longer workshops, mainly due to expenses. Without funding, this will likely continue to be a major issue and one that we need to address.

We had some very successful workshops (long and short) since our last meeting and I would like to personally thank all of those who have worked so diligently to provide the highest quality PD to their peers!! I do not have statistics for all of the PD provided, but some of the data is provided in the appendix to this document.

Yearly Documented Impact:

Provided PD to estimated 1600 in 2015

+35 hours PD = 265 teachers

2-6 hours PD = 1350 teachers

Provided PD to over 1900 teachers in 2016

+80 hours (2 weeks) to 216 teachers

1.5-6 hrs = 1560 teachers

35-40 hrs PD = 200 teachers

According to survey teachers average around 80 students. Estimated impact in 2016

= over 150,000 students

2017 Summer Leadership Workshop (July 19-22):

- Perimeter Institute
- Institute for Quantum Computing--IQC has agreed to come and share materials and explain content to the PTRAs. This is some pretty cool and thought provoking stuff. Excited about this additional partner in quantum (In addition to Perimeter)
- Energy Resource Revisions
- Technology updates
- Opened application process mid-January via survey monkey
- Oversight committee will decide how to reimburse participants

Things as director I need to work on or need help with at this time:

1)PR: Making sure all workshops are posted on the aapt.org website, aaptpra.com website, and in the email blasts from the main office.

2) Input as to what direction the organization should take at this point with funding dwindling and the need steadily increasing. Perhaps collect a committee of members to help with a plan to bring to the rest of the members this summer.

3) Help in identifying potential partners at universities and TYC that will facilitate the workshops

4) Recruitment of new PTRAs to increase our potential outreach

5) Help in identifying potential funders and help identify (and write) grants (including ones from AAPT).

Appendix

Information from Surveys (approximately 250 respondents)

General Statistics:

- 47% were designated as a high needs campus
- 96% were public schools
- Large percentage have taught 5 years or less (46%)
- Twenty-one (8%) were first year teachers
- Of the 258 respondents, 24 majored in physics, physics education or geophysics (9.6%)
- One third male, 2/3 female

Areas of highest growth as a result of the PD

- Guiding students through investigative lab extensions
- Engaging students in collaborative learning
- Implementation of technology (probes, data)
- Lesson design and learning cycles
- Real life applications
- Understanding essential questions
- Lab safety

What participants found to be most beneficial.

- The hands-on activities and discussion with other physics teachers
- Ability to discuss in depth questions and activities.
- Hands on modeling was nice.
- Going from conceptual to measurement and math based.
- Constructivist model of teaching
- Manipulatives...5 E's, lab activity ideas...
- How do integrate science and math together and labs implementations
- The connection of concepts between each subtopic was most beneficial.
- Integration of hands on lessons with our standards. A deeper understanding of the content

Comments from participants

- It caused me to consider many other possibilities beyond the presented kid tasks.
- Thanks for showing us the labs and also providing supplies for use to use back at our schools.
- I really like how the content is connected to instructional practices that should be used in our classrooms.
- I didn't think I would grasp this, however the way the workshop was done it built on my prior knowledge which assisted in me learning the content.

PTRA Workshop Attendance 2016

Are you White, Black or African-American, American Indian or Alaskan Native, Asian, Native Hawaiian or other Pacific islander, or some other race?

Answer Options	Response Percent	Response Count
White	82.3%	186
Black or African-American	14.6%	33
American Indian or Alaskan Native	0.0%	0
Asian	0.4%	1
Native Hawaiian or other Pacific Islander	0.0%	0
From multiple races	2.7%	6
Some other race (please specify)		2
<i>answered question</i>		226
<i>skipped question</i>		3

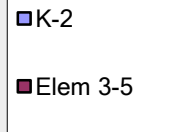
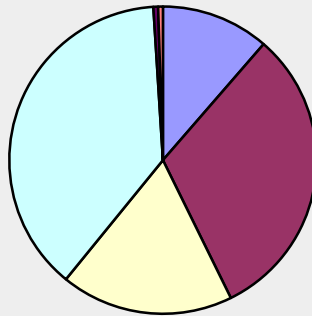
Number	Response Date	Some other race (please specify)	Categories
1	Jun 23, 2016 12:49 PM	Hispanic	
2	Jun 20, 2016 1:33 PM	Hispanic	

PTRA Workshop Attendance 2016

Which category below indicates the age of students you teach?

Answer Options	Response Percent	Response Count
K-2	11.4%	25
Elem 3-5	31.4%	69
Middle School 6-8	18.2%	40
High School 9-12	38.2%	84
Two Year College	0.5%	1
4 Year University	0.5%	1
Other (please specify)		16
<i>answered question</i>		220
<i>skipped question</i>		9

Which category below indicates the age of students you teach?



Answer Options	Core content teacher
Kindergarten	16
First Grade	3
Second Grade	7
Third Grade	11
Fourth Grade	29
Fifth Grade	22
Sixth Grade	15
Seventh Grade	11
Eighth Grade	33
High School Science	133
Secondary Math	9
Elementary Math	15
Computer Science	1
Two-Year College	1
4-Year University	3
Other	3

	A	B	C	D
1	PTRA Post Workshop Survey 2016			
2	What was the topic(s) covered during the workshop/institute?			
3	Answer Options		Response Percent	Response Count
4	Dynamics (forces)		19.6%	56
5	Energy		24.6%	70
6	Electricity		21.1%	60
7	Matter		3.9%	11
8	Magnetism		16.8%	48
9	Kinematics (motion)		18.9%	54
10	Momentum		14.0%	40
11	Waves		49.1%	140
12	Optics		21.8%	62
13	Quantum Physics		2.8%	8
14	Ranking Tasks, TIPERS		1.8%	5
15	STEM		8.8%	25
16	Other (please specify)		11.9%	34
17			<i>answered question</i>	285
18			<i>skipped question</i>	5

2 How many years have you been teaching your current assignment?			
3	Answer Options	Response Percent	Response Count
4	This is my first year	8.2%	21
5	2	12.9%	33
6	3	6.6%	17
7	4	11.7%	30
8	5	6.3%	16
9	6	2.3%	6
10	7	2.7%	7
11	8	4.7%	12
12	9	4.3%	11
13	10	5.9%	15
14	11	5.1%	13
15	12	2.0%	5
16	13	1.6%	4
17	14	2.0%	5
18	15	3.1%	8
19	16	3.1%	8
20	17	0.8%	2
21	18	2.3%	6
22	More than 18 years (please specify below)	14.5%	37
23	Other (please specify)		42
24		<i>answered question</i>	256
25		<i>skipped question</i>	34

2 Overall, how would you rate the workshop/institute experience?			
3	Answer Options	Response Percent	Response Count
4	Was a great experience and I learned a lot	74.1%	192
5	Was a good experience and I am glad I came	22.4%	58
6	Was OK, but could have been better	3.5%	9
7	I wish I had not come	0.0%	0
8	Feel free to comment on your above choice. What should have been done to		70
9		<i>answered question</i>	259
10		<i>skipped question</i>	31