

NOAA OER Educator Professional Development 2011-2016				
Key Findings and Recommendations				
WDWE 2011-2012 Key Findings (n = 300)	HDWE 2012-2013 Key Findings (n = 417)	Why/How 2013-2015 Key Findings (WDWE n = 578; HDWE n = 414)	Why/How 2015-2016 Key Findings (WDWE n = 354; HDWE n = 309)	Insight Comments
1	Overall, OER HDWE PDOs were successful at accomplishing the goal and objectives of the PDOs.	Overall, OER WDWE and HDWE PDOs were successful at accomplishing the goal and objectives of the PDOs.	Overall, OER WDWE and HDWE PDOs were successful at accomplishing the goal and objectives of the PDOs.	
2	Most participants in the first year of <i>Okeanos Explorer</i> Education Materials Collection, V 1, Most (54%) participants in the first year of <i>Okeanos Explorer</i> Education Materials Collection, Volume 2, <i>How Do We Explore?</i> Onsite Educator PDOs were new to Office of Ocean Exploration and Research PDOs, but almost 46% have attended a previous in-person PDO. Additionally, 36.0% of all HDWE participants attended a past <i>Okeanos Explorer</i> Education Materials Collection, Volume 1, <i>Why Do We Explore?</i> PDO.	Most WDWE (78.7%) and HDWE (68.1%) participants have attended previous Office of Ocean Exploration and Research PDOs. Additionally, PDO participants who attended a past PDO attended a cross section of all PDOs offered in the past.	Most WDWE (85.6%) participants had NOT attended previous Office of Ocean Exploration and Research PDOs while most HDWE (72.4%) participants had attended previous PDOs. Additionally, PDO participants who attended a past PDO had attended a cross section of all PDOs.	<i>We concluded that, to an extent, HDWE attracted an audience more specifically interested in the technological aspects of OE.</i>
3	WDWE participants taught a variety of subjects to K-12 and college students.	HDWE participants taught a variety of subjects to K-12 and college students.	Most PDO participants taught science yet many participants taught a variety of subjects to K-12 and college students. Participants in WDWE and HDWE PDOs most commonly taught grades 6-8 and 9-12, but at least 20.0% of participants in each PDO taught K-5 students. Since recruitment efforts OER WDWE and HDWE PDOs focus on grade 6 and above, this level of participation by K-5 teachers was higher than expected.	Most PDO participants taught science yet many participants taught a variety of subjects to K-12 and college students. Participants in WDWE and HDWE PDOs most commonly taught grades 6-8 and 9-12, but at least 17.5% of participants in each PDO taught K-5 students. Since recruitment efforts OER WDWE and HDWE PDOs focus on grade 6 and above, this level of participation by K-5 teachers was higher than expected.
4	Most participants were experienced teachers (10 years) of students from a wide range of backgrounds and school circumstances.	Most PDO participants were experienced teachers (13.5 years) of students from a wide range of backgrounds and school circumstances.	Most PDO participants were experienced (WDWE-12.7; HDWE-13.0 years) K-12 teachers (WDWE = 81.6%; HDWE = 78.5%) of students from a wide range of backgrounds and school circumstances.	Most PDO participants were experienced (WDWE-11.6; HDWE-12.4 years) K-12 teachers (WDWE = 82.9%; HDWE = 78.5%) of students from a wide range of backgrounds and school circumstances.
5	The overall experience for participants was very positive.	The overall experience for participants was very positive.	The overall experience for participants in either PDO was very positive.	The overall experience for participants in either PDO was very positive.
	97% of participants stated that the WDWE PDO advanced their PD goals.	99% of HDWE participants stated that the PDO furthered their PD goals.	At least 98% of participants stated that the WDWE and HDWE PDO furthered their PD goals.	At least 98% of participants stated that the WDWE and HDWE PDO furthered their PD goals.
	The PDO taught them content and about resources and lessons they can use.	The PDO taught them content and about resources and lessons they can use.	The PDOs taught them content and about resources and lessons they can use.	The PDOs taught them content and about resources and lessons they can use.
		Just over 72% of respondents plan to integrate PDO materials into their instruction. Additionally, between 50% and 88% intend to use lessons from WDWE and/or HDWE, the website, the OceanAGE page, and the <i>Okeanos Explorer</i> Atlas.	At least 76.2% of respondents plan to integrate PDO materials into their instruction. Additionally, between 46% and 88% intend to use lessons from WDWE and/or HDWE, the website, the OceanAGE page, and the <i>Okeanos Explorer</i> or Digital Atlas.	<i>This data is annually reported to the collective NOAA Office of Ed performance measures.</i>
		99.6% of PDO participants stated that the WDWE and HDWE PDOs enhanced their students' learning.	At least 99.1% of PDO participants stated that the WDWE and HDWE PDOs would enable them to enhance their students' learning.	
		99.0% of PDO participants said they would participate in another PDO conducted by Ocean Exploration in the future.	At least 98.3% of PDO participants said they would participate in another PDO conducted by Ocean Exploration in the future.	
6	All pre to post differences on individual items showed increases and were significant at p=0.01.	On all WDWE and HDWE items where pre/post comparisons were made, the post mean was significantly greater than the pre mean. On most items common to both the WDWE and HDWE assessments, the pre-means from HDWE were greater than the pre-means from the WDWE PDO.	On all WDWE and HDWE items where pre/post comparisons were made, the post mean was significantly greater than the pre mean. On most items common to both the WDWE and HDWE assessments, the pre-means from HDWE were greater than the pre-means from the WDWE PDO.	
WDWE 2011-2012 Recommendations	HDWE 2012-2013 Recommendations	Why/How 2013-2015 Recommendations	Why/How 2015-2016 Recommendations	Insight Comments
1	No specific recommendations from evaluator	HDWE PDOs should continue to be implemented as they were during 2012-2013.	The relationship between NOAA OER and the informal science centers that host PDOs is an excellent example for a federal/local partnership. There are few issues with host sites and based on facilitator comments, the division of labor seems to work well. The OER model is a good example for other agencies to follow when considering partnerships with local entities.	The relationship between NOAA OER and the informal science centers that host PDOs is an excellent example for a federal/local partnership. There are few issues with host sites and based on facilitator comments, the division of labor seems to work well. The OER model is a good example for other agencies to follow when considering partnerships with local entities.
2		WDWE and HDWE PDOs are running well. This approach and format should continue to be implemented for any future PDOs.	WDWE and HDWE PDOs are running well. This approach and format should continue to be implemented for any future PDOs.	
3		This PDO model reaches teachers and educators near the host sites across the U.S. Ocean Exploration should continue to reach out to regional educators and expand opportunities to reach educators across the U.S. as resources allow.	This PDO model reaches teachers and educators near the host sites across the U.S. Ocean Exploration should continue to reach out to regional educators and expand opportunities to reach educators across the U.S. as resources allow.	
4		These PDOs are excellent at introducing NOAA science to teachers and educators, and therefore, to students nationwide.	These PDOs are excellent at introducing NOAA science to teachers and educators, and therefore, to students nationwide.	
5	Objectives and PMs should be revised to reflect the content and realistic outcomes of current PDOs.	Whether these PDOs are continued, modified, or new PDOs are offered in the future, objectives and PMs should be revised frequently to reflect the content and realistic outcomes of the PDOs being offered.	Whether these PDOs are continued, modified, or new PDOs are offered in the future, objectives and PMs should be revised frequently to reflect the content and realistic outcomes of the PDOs being offered.	<i>These were revised regularly to reflect what we were offering.</i>
6	The Logic model and evaluation plan should also be revised to reflect the intent of the current PDOs; Assessments of PDOs should be revised to reflect how PMs are currently being met.	The Logic model and evaluation plan should also be revised to reflect the intent of the current PDOs.		<i>These were revised regularly to reflect what we were offering.</i>
			Note: Demographic information has been collected for years but never analyzed. < 20% participants are of an ethnic background other than white; > 40-50% of participant's students are white; > 50% of students receive free or reduced lunch	