OER Education Review Response: Implementation Update

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I. Promote and Strengthen the Community of Ocean Exploration Programs

II. Enhance Value of Expeditions to the Education Community

III. Enhance Professional Development Workshops to Increase Impact

IV. Improve Organization of Educational Materials and Website

V. Update/Develop Educational Materials to Reflect Current Research and Standards

VI. Expand the Ocean Exploration Education Alliance Network

VII. Enhance Diversity in Program Participants
OER Education Initiatives

**Educator Professional Development**
Workshops, Lesson Plans, Activities

**Scientist Professional Development**
Explorer-in-Training, Hollings Scholar, Knauss Fellowship

Leveraging partnerships to reach all age groups across the education spectrum.
Education Review Recommendations

I. Promote and Strengthen the Community of Ocean Exploration Programs

• OET-SOI-OER-NOAA Education “alliance”
• NASA
  • Ocean Worlds
  • Challenger Center for Space Science
• Octonauts and The Deep
• Ocean Discovery Institute
  • focus on underserved communities
  • Possible “Cuerpo de Exploración”
• Ocean Today
  • NOAA Video Studio
• Inner Space Center
  • New livestreaming & live interaction approaches
II. Enhance Value of Expeditions to the Education Community

• SOI-OET-OER Website with shared education resources, including ship schedules and other information about expeditions (could be expanded to other organizations)
• First expedition findings webinars for workshop alumni (February 2019). Could be expanded to include SOI and OET.
• Increase number and format of live interactions. Not ship schedule dependent.
• Linking expedition results to educators in underserved communities (Puerto Rico, American Samoa)
Education Review Recommendations

III. Enhance Professional Development Workshops to Increase Impact

- Expert observers to workshops to advise on ways workshops can incorporate current pedagogy, standards, and learning
  - Report and recommendations to OER
- Regular updates to workshop materials to reflect current expedition results, other information; pending revamp of OER education materials (with outside facilitation, OET, SOI).
- Process underway at NMSF to hire a new evaluator focused on measurable—and relevant—results
- Search underway for two additional workshop facilitators
  - One to serve Midwest, one bi-lingual for Spanish-speaking communities
Education Review Recommendations

IV. Improve Organization of Educational Materials and Website

• Rebuilt OER website first step. Focus now on Education content to manage “content as vast as the ocean.”
• Launch of new OER-SOI-OET web space on (noaa.gov) for joint materials in 2019
• New internal focus on highlight videos and other communications products tailored for education.
• Engaging education community through Facebook (a frequent educator request)
  • Expedition findings
  • Updates to material
  • Opportunities for live interactions
Education Review Recommendations

V. Update/develop educational materials to reflect current research and standards (including 3D learning, NGSS)

Short Term (now)
• Rebuilding “theme pages” into modular packages based on specific topics/phenomena

Medium Term (2019-2021)
• Increase website searchability of education materials by phenomena, NGSS, etc.
• Reconsideration and/or revamp of OER education product line (with outside facilitator, OET and SOI involvement)

Long Term
• Potential for integrated OET-SOI-OER suite of education products and services (with room for other partners)
Education Review Recommendations

VI. Expand the Ocean Exploration Education Alliance Network, with a particular emphasis on inland states

- Since the review, added new Alliance partners:
  - Albuquerque Biopark, NM
  - Great Lakes Aquarium, Duluth, MN
  - EcoExploratorio, San Juan, PR (agreement in principle)
- NMSF to help identify other inland opportunities
  - Detroit
  - Denver
- Using new Alliance Network partners to help develop approaches to underserved communities (Native American, Spanish speaking)
VII. Enhance diversity in program participants

- Initial approach: explore more effective approaches to educators serving Spanish-speaking, Native American, and Pacific Island communities
  - Using existing relationships and experience
- Native American
  - Session at American Indian Science and Engineering Society Conference on educator needs (2018)
  - Albuquerque BioPark
  - Olympic Coast National Marine Sanctuary
- Spanish-Speaking
  - Puerto Rico (linked to 2015 and 2018 expeditions
  - Ocean Discovery Institute
  - Translation, new services
- Pacific Island
  - Teacher workshops in American Samoa through Waikiki Aquarium
  - Potential to expand to CNMI and Guam
  - Leverage CAPSTONE legacy