IODE Steering Group for Ocean Teacher (SG-OT)

Second Session
Miami, Florida
11-15 April 2011
Abstract
The IODE Steering Group for the IODE Ocean Teacher was established during IODE-XVI to support the IODE Resource Kit Project. The IODE OceanTeacher is a follow-up to the Resource Kit and Ocean-PC and a complement to IODE data and information management capacity building activities. During its Second Session the Steering Group reviewed the current status of OceanTeacher and Ocean Teacher Academy, noting that substantial developments have occurred since the last meeting and making OceanTeacher an important tool for capacity building. A SWOT analysis of the current situation was performed. The possibility of further exploring online tools was discussed with a distance-learning expert. The list of currently available training courses was examined, and how to make it a training resource for other organisations, thus OceanTeacher becoming a service provider in ocean-related capacity building in the future. The Steering Group also discussed future surveys on training needs and gaps and developed a comprehensive list of topics for training. The OceanTeacher website and Classroom were extensively discussed and a list of improvements was outlined. The Steering Group also drafted a strategic long-term plan for the next 5 years, bearing in mind the changing training needs and funding sources.
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1. OPENING OF THE SESSION

The Session was opened on Monday April 11th at 9h30, by Ms Linda Pikula, host of the meeting. Ms Pikula welcomed the participants to the National Oceanographic and Atmospheric Administration (NOAA) facilities in Miami.

The OceanTeacher (OT) Training Coordinator Ms Claudia Delgado outlined the objectives of the meeting.

2. DISTANCE LEARNING BEST PRACTICES

During the first 3 days of the meeting (11th - 13th April), Dr. Judith Boettcher presented key ideas and concepts about distance learning. Main subjects addressed were:

- The pros and cons of several learning systems (from fully classroom or Face-to-Face (F2F), hybrid and to fully online) [%the best of two worlds’];

- The 10 best practices of online teaching:

  (a) Be present at the course site;
  (b) Create a supportive online course community;
  (c) Develop a set of explicit expectations for both the students and lecturer regarding communication channels and work time/load;
  (d) Use a variety of large group, small group, and individual learning experiences;
  (e) Use both synchronous and asynchronous activities;
  (f) Implement informal questionnaires requesting students feedback and suggestions for improvement;
  (g) Implement discussion fora that invite questions, reflections and responses – and ‘wrap’ the discussions;
  (h) Focus on using content resources and applications that are digital and easily accessed;
  (i) Combine core concept learning with customized and personalized learning;
  (j) Plan a good closing and wrap up activity for the course.

- Online training saves resources (e.g. travelling and accommodation costs), but not the work needed to structure the courses; online training does in fact demand more effort from the students

- In general, the rationale (to go online) is to maximize the audience (note: this also applies to OTA). [Note: for further details see Annex 2].

It was then decided that the following courses should be made available fully online in 2011:

- DM: Marine GIS
- MIM: Grant Writing

These two courses are similar in structure (1 week long) or 21 working hours. Therefore, each of these courses can be adapted into 3-4 weeks long courses, assuming an average of 6-7 hours work per week by the student. Details will be decided upon later in collaboration with Judith Boettcher.
Other courses may be adapted into fully online and/or blended learning in the near future. It was suggested, e.g., to organize the Basic Data Management training course into a fully online course offered over a period of 3-4 months, and then organize the Advanced Data Management training course as face-to-face (F2F) (keeping the same group of students). Mr Greg Reed offered to provide and adapt an already developed course on ‘Data policy’ into fully online (1 day-long course).

It was suggested to use such a model extensively, i.e., to organize blended courses with a preparatory online phase during a period of a few weeks up to months, and then a final phase in the classroom with only the best students or those who succeeded in completing all tasks assigned, etc. The rationale behind this strategy is to select only the best and/or more motivated students, and ‘reward’ them with the possibility of meeting the lecturers and course colleagues.

Some tips to improve courses’ quality (either online and F2F):
- Always have ‘ice-breaking’ activities;
- Implement course assessments as early as possible (namely using SurveyMonkey):
  o by the end of the first day, ask the students ‘how are things going’, so that correcting measures can still be implemented;
  o always have final course assessments (for corrective/adaptive measures in future courses);
- In order to establish long-lasting community networks, need to organize outside/after-hours activities (e.g. beer tasting, city tours, etc);
- To make full use of the Moodle platform, keep aside a few hours in each course timetable to explain the students on how to use Moodle (for their later use, post course);
- Webinars can be made feasible in developing countries with poor internet connections, namely by splitting audio from video and providing separately any critical graph information and materials).

3. OCEANTEACHER SWOT ANALYSIS

A Strengths-Weaknesses-Opportunities-and-Threats (SWOT) analysis was performed, taking into consideration inputs from the Steering Group members and in order to provide a broader perspective on how to build a long term plan (see Annex 8).
4. STATUS OF CURRENT LIST OF COURSES

All courses currently available in the OceanTeacher Moodle Classroom were reviewed and catalogued into 7 categories or ‘status level’:

- Type 1: complete (i.e., designed, have been taught in the past, on the web and Digital Library populated)
- Type 2: almost complete (i.e., designed, have been taught in the past, on the web but DL not populated)
- Type 3: designed, have been taught in the past, not on the web and DL not populated)
- Type 4: have been taught in the past and PowerPoint presentations are uploaded
- Type 5: course under development
- Type 6: course needs updating
- Type 7: out of date/obsolete, i.e., to be archived

Subsequent to this analysis, the courses were categorized as follows (for further details see also Annex 3)

- type 1: 5 courses in Data Management
- type 2: 11 courses; (4 Marine Information Management, 4 Data Management, 3 Interdisciplinary)
- type 3: 1 course in Data Management
- type 5: 2 courses in Data Management
- type 6: 1 course in MIM Marine Information Management
- type 7: 1 course in Data Management

5. COURSES CALENDAR

The need to have a new, updated survey on training needs was agreed upon. Therefore, the calendar of training activities for the next biennium (2012-13) was not decided during the meeting, as it will be based on a new survey to organize in June 2011.

Following the analysis of courses currently available, this new survey on training needs should include:

- types 1 and 2 courses list (ranking question);
- question on interest in types 3 to 6 courses;
- other topics needed (open question);
- list of new topics pre-identified by the Steering Group (see annex 3);
- furthermore, the survey should target both:
  - the IODE community (Data Management + Marine Information Management);
  - the end users of those services (such as the researchers that use those libraries);
- the survey will be created in SurveyMonkey and will be circulated (as pdf) amongst the Steering Group for approval of structure and contents.

Given the usefulness of surveys for activities planning, the need to have training on how to prepare surveys was also mentioned.
6. **OT/OTA WEBSITE ORGANIZATION AND OPTIMIZATION**

An extensive discussion on how the OT Moodle Classroom is being used took place. The following needs for improvement and/or decisions were identified:

- Need to identify the lecturers and/or authors for each course;
- Need to identify the authors of objects (e.g., PowerPoints and other materials) to identify permissions and copyright;
- Need to keep all (past) courses available in the Moodle Classroom (following, e.g., a chronological order) as well as to have dates associated with each course. As a consequence, new editions of the same course should not overwrite the previous version(s) and each time a course is lectured it will have a different date. This also implies that courses should not be modified after they were taught; this will also apply to courses customized for different geographical regions [Note: this implies the need to develop a policy on how long each course should be maintained available online];
- Courses’ short names need to be uniform: CODEYEAR (e.g. DAM2010);
- Videos assigned to a specific course/activity need to be embedded into the course outline in Moodle and not only uploaded to the OT Vimeo library;
- Need to provide video metadata (where, whom, date, etc, i.e., course metadata) details for each video; if possible, also add an abstract to each video;
- Need to verify the ‘live status’ of links embedded in PowerPoints and course pages and any other materials on a regular basis;
- OTA registered students (i.e., who have been through a selection process by OT) need to enrol for the course through Moodle (so that they can participate in group discussions and to have assignments and, ultimately, being evaluated and be awarded with a course certificate) [Note: nevertheless, the courses will still be 100% free and available to the community of users];
- Need to make the list of participants of each course available on Classroom; concurrently to this, the Alumni System available on IODE website needs to be updated;
- Need to have templates to harmonize presentation of contents (PowerPoints and other materials);
- Need to restructure OT homepage so it includes a clear overview of its components, a detailed calendar of all courses of the current year, links to lectures, attractive photos/images, etc. [note: this was partially done during the meeting].

7. **OCEANTEACHER LECTURERS**

The current status of OT lecturers was discussed.

Given the intention of OT to further develop the online training, the following definition was established: ‘**Instructor: person responsible for both face-to-face (F2F) and online tutoring**’.
The Steering Group acknowledged the need to update instructors on their functions and responsibilities, and therefore the following documents will be prepared:

- tasks they are expected to perform (e.g. tutoring, providing course details ahead of application process);
- what papers/products/materials are they expected to provide;
- pedagogy manuals*:
  - how to structure courses;
  - how to assess students performance;
- more intensive use of Moodle tools for interaction with students (e.g., use more surveys, quizzes, assignments, etc).

*Note: these will be put together with the help of Judith Boettcher.

Given the migration to the Moodle 2.0 version in August 2011, a simplified manual will be provided for the instructors. If needed, training will also be provided.

Until further notice, the Steering Group decided that Instructors will not be paid a fee.

8. **OCEANTEACHER STUDENTS**

The need to have a more standardized and critical application and selection process for the students was acknowledged.

Therefore, a new application and selection procedure, including an extensive application form and a set of questions concerning the possibility of co-funding will be established. In the case of longer courses (e.g. online and/or blended courses), prospective students may be given a pre-assignment (e.g. produce a poster, short essay, etc.) so they can demonstrate both technical capacities and motivation to attend the F2F component of the course, serving as a selection tool. Note: see annexes 5 and 6.

9. **OCEANTEACHER/OCEAN TEACHER ACADEMY OUTREACH**

The recent experience of very few applications for a particular course demonstrated the need to advertise the OTA training programme more widely. It also revealed the need to make the course objectives and contents more clear for potential applicants. Several ideas were discussed:

- to have a 1 minute long video with the trainer explaining what the course is about, purposes of the course, etc.;
- need to have clear descriptions of expected learning outcomes, target audience, and Table of Content for each course before course application opens;
- OceanTeacher Academy courses should be widely advertised by organizations such as SCOR, POGO, OBIS, Marine-B discussion list, etc, besides the already established communication channels;
instead of printing out costly leaflets/booklets to advertise OTA training programmes every year, OT could send postcards with a URL pointing to a detailed pdf.

10. OCEANTEACHER WEBSITE AND SOFTWARE

The OceanTeacher website and software were presented by Mr Aditya Kakodkar, including the new 2.0 version of Moodle.

A mock Moodle/OT Classroom for exercising/tryouts is available (http://sandbox.iode.org). All materials uploaded are deleted every 2 days.

Since it was acknowledged that the wiki available on Moodle 2.0 is still not sufficiently user-friendly, this will not be used until further extensive testing. It was agreed that OT Website will migrate into Moodle 2.0 by August 2011 at the latest.

Privileges for the Moodle classroom were explained and discussed, underpinning the need for consistency throughout the whole site. Privileges were re-assigned accordingly.

Concerning OT data use policy, it was decided to use the Creative commons (CC) license. It was decided to use the following:
- International license
- No commercial use
- No modifications
- Need to always cite the author/source

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Figure 1: Creative Commons license symbol.

A new protocol for students’ participation in a course was agreed upon (only for students selected to attend a specific course), and as such students will need to register and enrol in the course:
- 1\textsuperscript{st} step: register and log in;
- 2\textsuperscript{nd} step: enrolment key sent to the student belonging to the group selected

Note: for further details on this section see Annex 7.

11. IODE-XXI REPORT ANALYSIS

Concerning specific questions requested by IODEE-XXI, the following decisions were taken:

Agenda item 8.1: Discuss the possibility to translate OT courses and how to (non-English course materials and contents):
The OT coordinator and OT trainers will mentor students who demonstrate potential for teaching and/or co-teaching (at least 1 Spanish + 1 French speaking) in each course;

OT will provide the English version of each course as a package, and the aforementioned identified co-teachers will be responsible for translating these materials.

Agenda item 8.2: Discuss how to address the internet connectivity and bandwidth problems […] and how to make the digital library and/or classroom materials available in offline version:

- OT will explore the feasibility of using Poodle (http://www.mafit.org/products/poodle) to provide OTA offline;
- Nevertheless, it should be kept in mind that DM always requires downloading datasets.

Agenda item 8.3: Discuss how to feed OT with training materials and tools from other sources:

- OT will contact SeaDataNet on how to make their training materials available;
- OT will provide the necessary information on how to upload Cruise Summary Reports (CSR) to interested authors;
- OT will inform COMET that OT can make COMET’s training materials available.

Agenda item 8.5: Discuss how to make MS contributing more to OT (DL, training materials and trainers):

- OT needs to identify/target specific contributors, often involved with IODE in the past (e.g. Bob Keeley, etc)
- OT needs to become attractive to potential trainers

12. MEETING WITH GE-BICH

The meeting with the Co-Chair of the GE-BICH (Mr Hernan Garcia) took place via audio conference, between 10h00 to 10H45, Friday 15th. Mr Hernan Garcia gave a presentation on the main goals of GE-BICH and potential interactions with OT, as follows:

Concerning GE-BICH contributions to OT:
- OT needs to provide info/guidance on where/how GE-BICH can contribute (e.g. complement courses, best practices, etc). Therefore, OT will identify gaps and inform GE-BICH on:
  - Courses
  - DL contents
- GE-BICH will identify potential instructors for OT/content providers for DL (e.g. Mary Kennedy will be contacted by Hernan Garcia)
- GE-BICH will allow the uploading of ‘The IMBER cookbook’ to become an OT resource

Furthermore, GE-BICH contributions to OT could be:
- Updating the marine parameters value ranges
- Taxonomic standards
- Possible new interdisciplinary course on building vocabularies/ontologies/glossaries
  Note: for further details see annex 8 (Hernan Garcia’s presentation).

13. STRATEGIC LONG-TERM PLANNING FOR OCEANTEACHER

Taking into consideration the discussions of the previous days, including the SWOT analysis, the following broad objectives/steps were set for the next period of ~ 5 years:

1) 50 % of the training activities should be organised in distance learning mode:
   - Organize blended courses;
   - Keep face-to-face courses when course thematics so demand;
   - Organize fully online courses when thematics allow it (e.g. Marine GIS).

2) Have (keep updated) a catalogue of at least 20 different courses ready to be delivered at any time: e.g. organize courses into shorter modules (1-2 days long); also clustering modules around specific thematics, in order to make these courses more attractive [Note: this will allow the development of the ‘courses/services provider concept for OT in the future, which will give some level of funding];
   - Organize each year (at least) 2 new courses;
   - Establish collaboration with developed regions/countries (e.g. through IAMSLIC regional groups (for MIM): building modules for OT.

3) Launch a survey on training needs and gaps every year: These surveys will target not only the traditional OT ‘clients’, but also their own users (e.g. the researchers who use the libraries).

4) Courses accreditation:
   - Have 50% accredited courses
   - Have peer reviewers (for course contents and digital library)

In order to attain the aforementioned objectives, OT should:
   - Benchmark best practices from United Nations University (UNU);
   - Establish partnerships with public universities, preferentially the ones geographically close to the training centres;
   - Have universities including data management and information management in their curricula.

5) Have one training centre per ODIN/geographical region:
   - INCOIS (Hyderabad, India) is already under development;
   - China has also offered facilities;
   - Further investigate the implementation of a training centre in Mombasa (Kenya);
   - Seek potential interested parties/Member States to establish a Training Centre in Latin America.

Further to this, it will be of interest to evolve to a ‘specialized’ training centres concept, i.e., to have training centres specialized in different thematics or fields of
knowledge (e.g. operational oceanography, marine meteorology, marine biodiversity, etc).

6) Implement a succession plan for tutors. This can be pursued by:
   - Having current lecturers to mentor new ones (bring or select from pool of trainees; use co-teaching as a tool/source of new trainers;
   - Having an announcement (e.g. on OT website) for trainers recruitment in order to establish a pool of trainers from Universities, data centres, libraries and other organisations [Note: this implies the need to establish a set of criteria to select new trainers].

Further to this, the need to ‘train the trainer’ was identified (i.e., pedagogy training, how to conceptualize a course, how to use Moodle, handbooks for teachers, templates, etc). This can be done with the help from Judith Boettcher.

7) Funding (need a sustainability business plan for OT)
   - Have at least 20-30% self sponsored attendees (overall costs)
   - Seek new (co)fundlers:
     - European Commission (being a course provider for other organizations, outsourcing, …);
     - International Foundations/Organisations (e.g. Gates Foundation, etc,…).

8) Digital Library
   - DL should become a reference for use by a broader public;
   - Despite it being a ‘work-in-progress’ project, it needs to be kept as complete as possible, i.e., not having many empty sections at a given time;
   - Task: Populating and reviewing existing pages;
   - Identify new content providers:
     - e.g. Bob Keeley has recently volunteered (but needs guidance and training);
     - Make use of students to populate specific sections as part of assignments during the courses.

9) OT communication and outreach:
   - Always use OT logos/pictures on official materials;
   - Make available online OT posters (high resolution repository) for use in different occasions (e.g. for general outreach);
   - Have a general image/layout of OT (to be used on all OT related documents);
   - Default use of CC (Creative Commons).

14. OTHER DECISIONS AND ACTIONS POINTS

Several decisions and/or recommendations were taken, as listed below:
   - The training course on ‘Outreach and Communication Tools’ will be postponed to 7-11th Nov. 2011 (tentative schedule);
   - OTA should organize no more than 4-5 courses each year the next 2 years (2012 and 2013);
   - OT needs to have long-term planning goals (e.g. contingency plan for the case funding ceases); (note: 2013 is the ending date of the current project);
OT needs to explore the possibility of co-sponsoring (from the attendees side) in order to reduce costs;
OT needs to explore other external funding (e.g. European Commission, International Foundations);
OT should have a catalogue of modules/courses available (F2F, blended and or online) for any organization to outsource OT (OT to become a service provider in Capacity Building for international organizations).

15. CLOSURE AND DATES AND PLACE OF THE NEXT SESSION

The Second Session of the IODE Steering Group was closed on Friday 15th at 12h30.

It was recommended that both date and venue of the next Session will be discussed later.

The participants thanked Ms Linda Pikula for all the arrangements and for providing a nice working environment for the meeting.

16. ADOPTION OF THE SUMMARY REPORT

The Group requested the Secretariat to prepare the report of the Session.
ANNEX I

AGENDA

Monday, 11th April

1. Presentation of the participants and logistics for the week
2. Discussion of the agenda/approval
3. OTA
   3.1. Presentation of OT/OTA overall goals and objectives (Claudia Delgado)
   3.2. SWOT Summary (Claudia Delgado)
   3.3. Presentation of OT/OTA website (Adi Kakodkar/Claudia Delgado)
   3.3.1. Moodle and Mediawiki demo
4. Presentation of Designing for Learning [http://www.designingforlearning.info/] (Judith Boettcher)
   4.1.1. Overview of best practices and principles of online learning
   4.1.2. Different possible formats (e.g. short courses, webinars, face to face sessions, etc)
   4.1.3. General useful tips and common pitfalls of online training
5. Discussion

Tuesday, 12th April

6. Continuation of previous day
6.1. OTA SWOT analysis: assessing OceanTeacher’s Educational Design, Structure and Tools
6.2. OTA SWOT analysis: planning of technical developments

Wednesday, 13th April

7. Continuation of previous day
7.1. OTA SWOT analysis: way forward and setting of a preliminary plan of activities
   7.1.1. Short-term (next 12 – 24 months)
   7.1.2. Long-term plan (5 years),

Thursday, 14th April

8. IODE XXI Report analysis
8.1. Discuss the possibility to translate OT courses and how to (non-English course materials and contents)
8.2. Discuss how to address the internet connectivity and bandwidth problems persisting in some countries, and how to make the digital library and/or the classroom materials available in offline version.
8.3. Discuss how to feed OceanTeacher with training materials and tools from other sources:
   8.3.1. Black Sea Scene project
   8.3.2. Cruise Summary Reports, etc
   8.3.3. COMET training site
   8.3.4. Others
8.4. Discuss the development of new training materials
   8.4.1. Case-study materials as well as step-by-step training materials etc.
8.5. Discuss how to make Member States contributing more to OceanTeacher
   8.5.1. the Digital Library
   8.5.2. training materials and course development for the Classroom
   8.5.3. trainers for OTA courses
8.6. Assessment of training needs
8.6.1. Implement both “top-down” and “bottom-up” surveys on a regular basis, in order to identify training needs across the Member States, and structure courses around those identified priority needs
8.6.1.1. The top-down survey: discuss survey used previously (2008)
8.6.1.2. The bottom-up survey: approve template, approaches, etc?
8.6.2. Survey of past beneficiaries from OT training courses and potential clients for training.
8.6.3. Surveys planning and how to reach its targets
8.7. Implement recently identified training needs in the following fields:
8.7.1. Marine Spatial Planning
8.7.2. Disaster Planning for Information Management Systems
8.7.3. Marine GIS
8.7.4. Data quality control
8.7.5. Data archaeology
8.8. Prepare a long term (5-10 year) training plan [see also points 7.1.i and 7.1.ii]
8.9. Provide updates and/or complete versions of some IOC/IODE materials and manuals available through OT

9. Establishment of new regional training centres
9.1. INCOIS-India
9.2. Others

10. OTA website
10.1. How popular are the websites?
10.1.1. www.oceanteacher.org
10.2. Ocean Teacher Software future plans (Aditya Kakodkar)
10.2.1. Moodle:
10.2.1.1. Current status
10.2.1.2. Upgrade to Moodle 2.0
10.2.1.3. Moodle privileges
10.2.1.4. Demo on more Moodle tools (Quizz, glossaries, Semantic Mediawiki
10.2.2. Semantic Mediawiki
10.2.2.1. Current Status
10.2.2.2. Do we need SemanticMediaWiki (SMW)?
10.2.2.3. Possibility of migrating content to Moodle Wiki.
10.3. OceanTeacher use Policy
10.3.1.1. Licenses to use content
10.3.1.2. Upgrade/patching policy

Friday, 15th April

11. OceanTeacher Digital Library TOC status/analysis (as of April 2011):
11.1. Contents to be provided by GE-BICH (Hernan Garcia – videoconference?)
11.2. General Glossary updating/completion
11.3. New content providers

12. Development of new training materials by invited trainers/content providers

13. Future Plans for OceanTeacher (including courses agenda planning (2012-2013))
13.1. New training thematics identification
13.2. Interdisciplinary Thematics
13.2.1. MSP: Marine Spatial Planning
13.2.2. Tsunami Teacher
13.2.3. Others
13.3. Marine Data Management (Greg Reed)
   13.3.1. Future OT as to Data Managers
   13.3.2. New materials to develop
13.4. Marine Information Management (Linda Pikula)
   13.4.1. Future OT as to Marine Information Managers
   13.4.2. New materials to develop
   13.4.3. Group Discussion of MIM Steering members

14. Planning of other upcoming events
15. OTA Steering Group SG meeting summary and way forward
16. Next OTA Steering Group meeting planning
ANNEX II

Brief Report ‘Integrating Online and blended learning into Ocean teacher Curricula’,
by Judith Boettcher

Ocean Teacher Steering Group Meeting Report April 11 – 13, 2011
Brief Report
Integrating Online and Blended Learning into Ocean Teacher Curricula
Judith V. Boettcher
Designing for Learning

Discussions on the wisdom, timing and processes for integrating online and distance learning into Ocean Teacher course offerings were part of the overall planning and SWOT discussions of the meeting. Here in brief is a summary of some of the issues in the design, development, teaching and transitioning to include online and blended courses as part of the Ocean Teacher Academy offerings.

1. Benefits of online and blended learning courses and learning events

The primary benefits of offering courses in online and blended formats are two: access and convenience. First of all, courses and learning events will be more accessible to a larger audience with the decrease or elimination of travel and housing costs, either to participants or the organization. Secondly, Ocean Teacher courses will also be more convenient for participants and for faculty as it means they won’t be away from their normal work responsibilities for weeks (1 to 3) at a time, for the longer courses.

Another benefit of online and blended courses is that building an active network and community among users over time will be more natural. As learners will be learning, interacting and talking online with their fellow participants during a course, they will likely, more naturally continue to communicate, network and support each other online after the course.

2. Disadvantages of online and blended learning courses and learning events

Many of the disadvantages of online and blended learning are the other side of the coin from the benefits. First of all, a major disadvantage is that learners will be in their normal work environment, and thus if they are “physically” present, they are likely to be expected to fully participate in their regular duties, leaving little concentration, time or energy for learning. There are ways to partially address this of course, by their managers/supervisors committing to their release from regular duties for at least part of each day and other techniques such as working from home or other centers. However working in alternate sites can raise other issues such as access to appropriate hardware and software and network connections. As the potential for participants from more well developed countries increases, however, access to appropriate resources may lessen as a factor. Still, the need for committing time and energy to both teaching and learning is a significant factor that needs to be acknowledged. In the shift to online and blended formats, the how, when and where time for teaching and learning is managed, is glossed over or waved away. This means that much learning and teaching is happening in the “extra” hours of one’s life, often late at night or on weekends.

Other disadvantages, other than the committed time for learning and for teaching on the part of the faculty volunteers, is that while travel is expensive, it is also often viewed as a benefit for both learners and faculty. Travel and being face to face over a period of days and weeks provides significant opportunities to network, bond and develop meaningful relationships that often last a lifetime. For learners who need a lot of support, either technically or psychologically, face-to-face time might be an imperative.

On balance, however, the benefits of moving selected courses and hot topics to fully online models and moving other courses to a blended model outweigh the disadvantages for many organizations today. Teaching and learning online is simply an extremely convenient and cost
effective way to access information, develop skills and competencies, and develop collegial networks. The tools for almost “being present face to face” are plentiful. Skype, and other
free applications truly do bridge the distance for many types of learning interactions and
teaching. And the additional time between sessions can be a real benefit for courses where
writing and producing projects is a key ingredient.
3. What about the effectiveness of online and blended learning? Does it work?
This is a question that has been asked and answered many times. In general, the answer is
that “Yes, it does work,” and “Yes, it is as effective as face-to-face learning.” I like to add
that “Yes, online learning works, but it is a different experience.”

A recent report from the United States Department of Education (2010) again confirmed these
findings, but also suggested that there were “hints” that maybe the better model, was neither
online or F2F, but a blend or hybrid of the two. I agree with this statement, not because of
extensive research, but intuitively it really does seem to be true, as blended courses can
capture the best of online learning and the best of face-to-face learning. So, when possible, a
blend is best. Some organizations are finding that models that include a face-to-face
component with international or national meetings are a way to do this.
4. What are the requirements for getting started with online and blended learning?
Offering online and blended learning requires planning for the four elements of any learning
experience:
• The learner,
• The faculty/mentor,
• The content or curricula that provides the resources for the knowledge and skills, and
• The infrastructure or environment in which the learner will be learning and the
faculty/mentor will be teaching and guiding.
Let me briefly address each of these.
First of all the learner needs to be able to access the learning infrastructure. This means
appropriate hardware, software, and networking connections. The needs and purposes of the
learners are also need to be considered. Learners actively engage and willingly invest time
and energy into learning that is meaningful to them. Learning in online and
blended environments requires a set of skills and discipline, and it is good to check for these skills and
the ability to self-manage and self-direct that is fundamental to learning success. Many
institutions pre-screen learners for these skills.
Teaching online and blended courses also requires skills that faculty might not naturally have.
Many faculty are willing to teach in online environments, but they also need support, time,
and coaching to develop the skills and habits and tools of learning in this new environment.
We discussed designing and preparing an “Ocean Teacher Training Program for Online and
Blended Learning.” This program might consist of a combination of prepared materials,
live/archived webinars and individual coaching. The individual coaching is recommended for
those times when faculty are teaching an online course for the first time or when a faculty
member is designing a new course. Since the faculty for the Ocean Teacher program are
volunteers this training and support needs to be easily accessible and not too time-consuming.

The content of an online/blended course is very similar to the content of a F2F course. The
primary differences are in the lecture strategy and the discussion strategy. These are the two
elements that must be transformed for an online course. It should be noted that preparing any
kind of a course takes time, talent and dedication. Online courses and blended courses
generally take more time to prepare as so much needs to be planned out in advance and
because the directions — often called the “teaching presence” — needs to be extremely clear
and precise.

Ocean Teacher has a great start on the infrastructure for online learning with the Moodle
LMS. This application provides the online classroom where teachers and students and others
can gather, discuss, think, practice, and perform. Other infrastructure tools are numerous and many are free or of low cost. Of course no infrastructure is complete without people and again, it looks as it Ocean Teacher has good support here.

Much more about these elements are in the resources listed at the end of this report.

4. What might be a first step for Ocean Teacher to get started with online learning? For effective change, volunteers are a good way to start. During the meeting, Greg Reed seemed to be willing to volunteer to be one of the first to take a weeklong course - OceanTeacher Academy Course DM: Introduction to Marine GIS and offer it in the online format. Also Linda Pikula also seemed to be a potential volunteer to offer the course — OceanTeacher Academy Course MIM: Writing for Professional Publications — in the online format. Both of these courses are weeklong courses. This means they are a good length for piloting the online format for Ocean Teacher audiences. Additionally the content of these courses require students to work on projects and the increased time for a course would provide more time to work on those projects.

5. What is a model that might work for weeklong courses?
We talked briefly about a potential design for a weeklong course. Assuming that a weeklong course has about 30 hours of actual work, translating that time into an online format suggests a three-week format requiring from 8 to 10 hours each week. Three weeks is a length of time that most folks could probably integrate into their work environment, particularly if supervisors could approve two half days each week for this learning program. A next step is to analyze these courses from an instructional design perspective to ensure that learning outcomes, learning activities and assessment strategies are all in alignment. An ecoaching process that consists of an initial course review, including analysis of a syllabus, meetings with faculty followed by course revisions and updates by the faulty, and then monitoring and mentoring the first teaching can work well as an informal getting starting strategy.

6. What is a model that might work for hot topic events?
For continuing education learning events, webinars that are one to two hours in length usually work well. The tools that are good for these webinars include Wimba, AdobeConnect and other tools that support multiple channels of communication, such as chat, email, audio, visual content and occasionally video.

These types of events have (1) preparation and announcement and registration elements prior to the event, (2) good infrastructure and support for the actual event, and (3) archiving and access of the event after the event, so that it remains accessible for later viewing by both the original participants and by others.

7. Organization of the Ocean Teacher site
Part of our discussion focused on the structure and organization of the Ocean Teacher web site. Currently the site describes two major resources — the OceanTeacher Digital Library and Ocean Teacher Courses. Both the live courses and courses available as independent resources were listed as courses. After some discussion about the merits of differentiating between the courses offered with a mentor/faculty leader and those courses that are available as stand-alone resources without mentoring or guidance, we proposed that the Ocean Teacher site be organized as follows:

* Ocean Teacher Academy – for those courses with an instructor to guide and mentor the learning. This will include all courses whether they are face-to-face courses, online or blended courses.
* Ocean Teacher Open Courseware — for those course materials that are part of the courses offered and are accessible to all, but do not have the instructor/faculty guide.
* Ocean Teacher Digital Library — for all those materials that support learning and knowledge about Ocean Teacher domain areas.
Note: I just checked the site at http://classroom.oceanteacher.org/ and I see that some changes have been made already which are close to the above organization. These are my notes from the meeting.
8. Other resources and tools
Here are a few resources for getting started.
Boettcher, J. V. & Conrad, R. M. (2006 – 2010) Library of Ecoaching tips at http://www.designingforlearning.info/services/writing/ecoach/index.htm. Note: This library of tips was organized and collected in the book below. This library of tips is still free and available online.
TedTalks, An online resource of really great 15-20 minute talks. Check out the talks on the ocean. Here is one by Sylvia Earle on saving our oceans.
http://www.youtube.com/watch?v=43DuLcBFxoY. Then here is one of my favorites by Ken Robinson on creativity in schools.
http://www.youtube.com/watch?v=iG9CE55wbtY&feature=related
## ANNEX III

**List of categorized courses**

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Course level</th>
<th>Course Title</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interdisciplinary</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Developing Institutional Websites</strong></td>
<td>2 and 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Marine Information for Websites</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Marine Data Products for Websites</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Writing for Professional Publications a)</strong></td>
<td>4 and 6</td>
</tr>
<tr>
<td><strong>Marine Information Management</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>Disaster Planning and recovery for Marine Librarians</strong></td>
<td>2 and 6</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Digital Asset Management</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Literature and Databases of Marine Sciences</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Preservation and Archiving of Digital Media</strong></td>
<td>2</td>
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<tr>
<td><strong>Oceanographic Data Management</strong></td>
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<tr>
<td></td>
<td></td>
<td><strong>Ocean Data Collection Development (2010)</strong></td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td><strong>Ocean Data Products and Synthesis</strong></td>
<td>1</td>
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<tr>
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<td></td>
<td><strong>Ocean Data Management for Young Scientists</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Introduction to Ocean Data Management for Students of the Environment</strong></td>
<td>7</td>
</tr>
<tr>
<td><strong>Basic Courses</strong></td>
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<tr>
<td><strong>Advanced Courses</strong></td>
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<tr>
<td></td>
<td></td>
<td><strong>Introduction to Marine GIS with SAGA</strong></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Environmental Imagery and Satellite Data Management</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Applied Courses</strong></td>
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<tr>
<td></td>
<td></td>
<td><strong>Marine GIS Applications (ArcGIS)</strong></td>
<td>1</td>
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<tr>
<td></td>
<td></td>
<td><strong>MapServer Application for a Marine Atlas</strong></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>MetOcean Modeling Jamboree-III</strong></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Use of GTSPP data (working title)</strong></td>
<td>5</td>
</tr>
<tr>
<td><strong>Accredited Courses</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td><strong>University Curriculum in Marine Data Management (2011)</strong></td>
<td>2</td>
</tr>
<tr>
<td><strong>Continuing Professional Development</strong></td>
<td></td>
<td></td>
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<tr>
<td>Operational Oceanography: a Synoptic View of the sea (2011)</td>
<td>5</td>
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<tr>
<td>------------------------------------------------------------</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to Metadata for Marine data Managers</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Establish IODE Ocean Data Portal data Provider</td>
<td>1 and 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marine Data Management ‘Roadmap’ Exercises</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Satellite Wind &amp; Wave products for Marine Forecasting</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ANNEX IV

List of new topics that should be considered for new courses or to be included in existing courses

Interdisciplinary
1. Building Vocabularies and Ontologies (GE-BICH) [new course]
2. Marine Spatial Planning (Charles Ehler instructor) [course in advanced state of development]

Marine Information Management - MIM
1. Methodologies and tools for discovering and accessing e-knowledge
2. Essential skills for libraries staff (business plans, cataloguing, purchasing, …)
3. Development and management of e-repositories
   - DSpace (OceanDocs)
   - E-Prints (Aquatic Commons)
4. Managing an Integrated Library Management System (ILMS)
   - Koha
   - ABCD
   - Greenstone
   - CDS/ISIS
5. Data publishing
6. Developing surveys
7. CMS (Joomla, Drupal)
8. Managing and publishing an e-journal
9. Developing an image/scanned document repository
10. Management skills
    - Project Management
    - Staff management
    - Negotiating skills
    - Interviewing
    - Budget management
    - Outcomes based planning
11. Copyright particularly digital/electronic copyright/ IPR
12. Marketing skills
    - Data analysis (using statistics)
    - Branding a service
    - Designing evaluation forms
    - e-Newsletters, design etc
    - Internal marketing
    - e-Survey design and methods
    - Multimedia to promote your service
    - Presentation skills
13. Contribution of Libraries to data archaeology and rescue
14. Communicating science to the public (outreach)
15. Designing and delivering training
16. Use of Social networking and apply them in the library

Data Management - DM
1. Operational oceanography
2. Use of GTSPPP (Global Temperature and Salinity Profile Program) data
3. Marine Spatial Planning (MSP)
4. Using OceanDataPortal (ODP) (user side)
5. Ocean Biogeographic Information System (OBIS)
6. Taxonomic Standards (GE-BICH)
ANNEX V

OTA application form

Ocean Teacher Academy Application Form
(Please use block letters or use your text processor)

Part 1 - PERSONAL INFORMATION

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Surname</td>
<td></td>
</tr>
<tr>
<td>Name (given name(s))</td>
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</tr>
<tr>
<td>Gender (male/female)</td>
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</tr>
<tr>
<td>Nationality</td>
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</tr>
<tr>
<td>Birth date (dd.mm.yyyy)</td>
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<tr>
<td>Country of residence</td>
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<tr>
<td>Passport number</td>
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<tr>
<td>Passport date and place of issue</td>
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</tr>
<tr>
<td>E-mail address</td>
<td></td>
</tr>
<tr>
<td>(e-mail will be the most important method of communication; you must provide one)</td>
<td></td>
</tr>
<tr>
<td>Alternative e-mail address</td>
<td></td>
</tr>
<tr>
<td>Home Address (full)</td>
<td></td>
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</tbody>
</table>

Person to be contacted in case of emergency

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
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</thead>
<tbody>
<tr>
<td>Surname</td>
<td></td>
</tr>
<tr>
<td>Name (given name(s))</td>
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</tr>
<tr>
<td>Relationship with this person</td>
<td></td>
</tr>
<tr>
<td>Telephone number (country code – area code – number)</td>
<td></td>
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<tr>
<td>Mobile phone number (country code – area code – number)</td>
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<table>
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<tr>
<th>E-mail address:</th>
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**Part 2 - COURSE APPLICATION**

<table>
<thead>
<tr>
<th>Course Title</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Course dates</th>
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</thead>
<tbody>
<tr>
<td>(dd.mm.yyyy to dd.mm.yyyy)</td>
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</tbody>
</table>

Motivation to attend this course (up to 300 words)
(Personal statement which includes your motivation for attending the course, how it will benefit your professional activity and career development and what it will bring to your institution; furthermore, indicate if there is any particular problem or issue at your institution that attending this training will contribute to solving?)

[ ... ]

After completing this training course will you have the necessary resources, including internet connectivity and/or access to necessary software, to apply the knowledge obtained? (Yes/No)

If No, does your institution have, or is it in the process of obtaining, the funding to have the necessary resources, including internet connectivity and/or software, to apply the knowledge obtained? (provide details)

<table>
<thead>
<tr>
<th>Have you attended other Ocean Teacher Course(s)? (Yes/No)</th>
</tr>
</thead>
</table>

If yes, state which course(s), where and when; also give a short comment on how it contributed to improve your skills (30 words maximum)

<table>
<thead>
<tr>
<th>Are you involved with any ODIN or NODC? (Yes/No)</th>
</tr>
</thead>
</table>

If yes, state which
Part 3 - EDUCATIONAL AND PROFESSIONAL BACKGROUND

EDUCATION:

List your Academic qualifications/degrees, Institution/place(s) and date(s):

<table>
<thead>
<tr>
<th>Academic qualification</th>
<th>Institution /place</th>
<th>Date</th>
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</thead>
<tbody>
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</tbody>
</table>

List any other workshops and training relevant to the course you are applying (include name, institution/place and dates(s)):

PROFESSIONAL EXPERIENCE:

<table>
<thead>
<tr>
<th>Job Title (current position)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Job description/functions</td>
<td>(Give a detailed description of your current professional functions and responsibilities: maximum 50 words)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total number of years of professional experience</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Employer Institution</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Institution (full address)</td>
<td></td>
</tr>
<tr>
<td>Name of the Head of Institution</td>
<td></td>
</tr>
<tr>
<td>Email address of Head of Institution</td>
<td></td>
</tr>
</tbody>
</table>

Do you have the necessary authorization to take leave from your job to attend the course? (Yes/No) From whom?

Would you have any objection if the Ocean Teacher Academy contacted your current employer? (Yes/No)

If Yes, explain briefly why (maximum 30 words)
Part 4 – FINANCIAL RESOURCES

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No</th>
<th>In the case you can cover one or more costs, indicate who will be sponsoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>I need full financial support (Yes/No)</td>
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<tr>
<td>I can cover the tuition fee (Yes/No)</td>
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<tr>
<td>I can cover my travel costs (Yes/No)</td>
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<tr>
<td>I can cover my accommodation and meal costs (Yes/No)</td>
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<tr>
<td>I can cover my medical insurance (Yes/No)</td>
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</tbody>
</table>

Part 5 – LANGUAGES

The training courses will the taught in English. How would you describe your language skills?

**English (please tick corresponding level):**

<table>
<thead>
<tr>
<th></th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoken</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Read</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other language(s)? Which? ____________________ (add as many tables as necessary)

<table>
<thead>
<tr>
<th></th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoken</td>
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<td>Read</td>
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<tr>
<td>Written</td>
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</table>

Part 6 – ADDITIONAL QUESTION

How did you learn about this OceanTeacher Training Course?

<table>
<thead>
<tr>
<th>Internet (specify)</th>
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<tbody>
<tr>
<td>Announcement by your national IOC/IODE contact points</td>
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</tbody>
</table>
Part 7 – DECLARATION BY THE APPLICANT

I hereby certify that the information provided in this application form is accurate and complete.

(Hand signature, date and place)

Please send this form to the e-mail address below, and attach the following documents:
  a) a scanned copy of the endorsement letter (signed by the head of your endorsing institution and corresponding stamp)
  b) short CV (max 2 pages)

Dr. Claudia Delgado
Training Coordinator
UNESCO/IOC Project Office for IODE
Wandelaarkaai 7/61
B-8400 Oostende
BELGIUM

e-mail: claudia.delgado@iode.org or cdelgado.otiode@gmail.com
Tel: +32-59-34 01 86
Fax: +32-59-34 01 52
ANNEX VI

OTA Registration Process

Application for Training Courses

Interested applicants can register for an Ocean Teacher Academy Training Course by submitting by e-mail to the Training Coordinator the following documents:

- a completed OTA Application Form,
- CV (2 pages maximum),
- an endorsement letter from the current employer/home institution.

The Course descriptions, topics covered, expected learning outcomes and pre-requisites (if any) are available at www.oceanteacher.org. The candidates should make sure to be aware of those before submitting an application.

The selection of the participants will take into consideration:
- educational and/or professional background, including compliance with any pre-requisites to attend the training course,
- applicants should demonstrate strong institutional support from their employer (the applicant’s employer should state his support with an official endorsement letter),
- applicants must be able to understand and communicate in English (unless stated otherwise, all courses are in English),
- candidates should have (at least) basic IT-skills, depending on the course they are applying for.

UNESCO is committed to promote gender equality. Therefore applications from women are strongly encouraged.

Sponsoring (full and/or partial) is available for a limited number of participants. Sponsored participants will be supported in one or more of the following costs:
- travel costs,
- accommodation and meals support,
- tuition fee
- medical insurance.

The selection of participants who will be sponsored will take into consideration:
- the applicant’s country’s development status (preference will be given to LIFDCs). The LIFDC list can be found at http://www.fao.org/countryprofiles/lifdc.asp
- expected impact of the training on the applicant’s career development and/or institution capacity development,
- endorsement of the applicant’s application by his/her employer: a letter from the employer stating the applicant’s present position within the organisation along with a description of the applicant’s professional responsibilities is required. The employer should explain the importance of the training course for the applicant’s position and for the organisation as a whole. The employer should preferably demonstrate the possibility to transfer the acquired knowledge upon return of the applicant to the home institution/country.
- the availability of any co-sponsoring

The application form, together with all required documents, should be sent directly to the OceanTeacher Academy Training Coordinator Dr. Claudia Delgado, during the period open for applications, published at www.oceanteacher.org.
Applications that are incomplete, illegible or reach the Project Office after the deadline will be rejected. Documents are to be submitted in English. Documents in other languages might be accepted (only IOC official languages), but the Project Office may request an official version translated into English.

All applicants shall receive an acknowledgement of receipt of their application by e-mail.

The Steering Group of the OceanTeacher Academy will carry out the selection of candidates, including applications for sponsorship. All applicants, selected or not to participate in a Training Course, will be informed by e-mail in due time.

Tuition fees

The course fees cover costs such as printed lecture materials, consumables, lunches, refreshments, etc. The fees are payable in advance by bank transfer.

<table>
<thead>
<tr>
<th>Course duration</th>
<th>Tuition and Additional Costs fee</th>
<th>Medical Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 week</td>
<td>650 €</td>
<td>25 €</td>
</tr>
<tr>
<td>2 weeks</td>
<td>1350 €</td>
<td>50 €</td>
</tr>
<tr>
<td>3 weeks</td>
<td>2025 €</td>
<td>75 €</td>
</tr>
<tr>
<td>4 weeks</td>
<td>2700 €</td>
<td>100 €</td>
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</table>

Contact details:
Dr. Claudia Delgado
Training Coordinator
UNESCO/IOC Project Office for IODE
Wandelaarkaai 7/61
B-8400 Oostende
BELGIUM

email: claudia.delgado@iode.org or cdelgado.otiode@gmail.com or training@iode.org

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ANNEX VII

Report on outcomes of discussions about OceanTeacher software, by Aditya Kakodkar

During the Second Session of the IODE Steering Group for OceanTeacher (OT) meeting in Miami, following topics were broadly discussed.

- Popularity of the OT websites: The steering group (ST) looked at the available statistics through Google Analytics on both OceanTeacher Classroom and library. Ways to improve access to the statistics and also customizing and downloading Google analytics reports were discussed.
- OT software current status and future plans: Present status and future plans for the OT software were discussed. Following are the brief topics discussed:
  1. A help desk should be setup for OTSoftware. Which include frequently asked questions as well as “How to - videos”.
  2. Changing the look and feel of both OT Classroom and Library was discussed and it was agreed to change the OT Classroom (Moodle), website to be the new OT home to replace the previous home at http://www.oceanteacher.org. It was also decided that all the content from the old OT home will be migrated to the OT classroom.
  3. The ST agreed to change the look of OT library (MediaWiki) to make it more visible as a part of OT and IODE.
  4. More exploration into search queries for MediaWiki was discussed along with inline semantic queries through the Semantic MediaWiki (SMW) interface.
  5. A brief discussion on user privileges and user roles was discussed and Course Creator (Moodle default) role was renamed as “Manager” and Teacher (Moodle default) role was renamed as “Course Editor/ Instructor”.
  6. A brief demonstration on features of new version of Moodle i.e. v.2.0 was presented. It included demo of Moodle activities such as quiz, glossary, forum, chat, survey etc. Need for including activities in present and future OT courses was also discussed.
  7. Course access to guest users and course students was discussed and it was agreed to compulsorily register students (from face-to-face courses) and enroll them into specific courses so as to make use of activity modules such as forums, chat and quizzes.
  8. Possibility of including course participants in calendar was also discussed.
  9. OT content information policy was discussed and it was agreed to implement a creative commons license in the OT websites.
  10. OT software upgrade and security patching policy was also discussed.
  11. Need for continuous training for OT course editors and instructors in OT software was discussed and online training and discussion sessions were agreed to be held to accomplish the same.
  12. An option for brief training of OT face-to-face course students in Moodle, to enable them to use OT classroom activities after the course.
  13. Discussions were also carried out on upgrading Moodle software (OT Classroom), to its new version i.e. v.2.0. It was agreed to host a pre-production version on IODE sandbox (http://sandbox.iode.org), so as to allow course editors/ instructors to get familiar to new features or changes in the software. June 2011 was agreed as a date for hosting the pre-production version on the sandbox and and final move by July 2011.
  14. Moving content of the OT Library from Mediawiki to Moodle wiki was also discussed. It was decided against it as the article creation/editing was not very user-friendly in Moodle wiki. But it was agreed to explore this option in the future, so as to allow all the content from OT courses to be placed together in one place.
  15. A demand by certain sections of OT users for an offline version of OT courses was also discussed. It was decided to look into software which allows creation of a offline version of Moodle courses.
ANNEX VIII

Presentation on GE-BICH, by Hernan Garcia (8 slides)

**IODE Group of Experts on Biological and Chemical Data Management and Exchange Practices (GE-BICH)**

**Main Goal:** To help develop standards for oceanographic biological and chemical data management and exchange, and improve the quality and quantity of chemical and biological data available to end users.

**Established** by IODE-XVI in Lisbon, Portugal, 31 October - 8 November 2000. The group's initial acronym of GE-BCDMEP was changed during the second GE's session to GE-BICH

Hernan Garcia, Brief on IODE
GEBICH activities

**GEBICH Membership:**
Four long-term and four short-term experts, including the chairpersons, selected from IODE's Member States; representatives of other expert bodies are also regularly invited to attend GE-BICH sessions (invited experts).

**Sessions:** GE-BICH meets every two years to discuss progress, identify new priorities and establish a two-year workplan

- 5th Session, Oostende, Belgium, 17-21 January 2011
- 4th Session, Oostende, Belgium, 27-30 January 2009
- 3rd Session, Oostende, Belgium, 27-28 November 2006
- 2nd Session, Liverpool, United Kingdom, 22-24 March 2004
- 1st Session, Silver Spring, MD, USA, 25-27 June 2002
GE-BICH IV three main areas of activities:

1. QC/QA of chemical and non-taxonomically defined biological oceanographic data;
2. controlled vocabularies for biological and chemical oceanography;
3. data reporting and data exchange of chemical and non-taxonomically defined biological oceanographic data.

Area 1. Key objectives:
* to compile existing protocols for the QC/QA of chemical oceanographic data collections;
* to organize a workshop of experts in the QC/QA and best practices of chemical oceanographic data;
* to write a white technical paper on issues discussed during the workshop;
* to help revise aspects of the IOC Manual 25 and to provide input to OceanTeacher.

Area 2. Key objectives:
* to compile lists of vocabularies and glossaries related to terms used to identify a number of sampling gears used to collect biological and chemical samples and measurements, marine biological organisms life stages and life cycles, and non-taxonomic plankton groups;
* to submit these vocabularies for governance by the combined SeaDataNet and MarineXML Vocabulary Content Governance Group (SeaVoX) and start the process of having them accepted as standards through the JCOMM/IODE Ocean Data Standards process.

Area 3. Key objectives: to identify and promote best practices for data reporting and exchange by contributing to existing initiatives and reviewing and cataloguing existing documents.

Hernan Garcia, Brief on IODE GEBICH activities

https://sites.google.com/site/gebichwiki/home
GE-BICH V (17-20 January 2011)

Main issues addressed:

• Review of GE-BICH IV actions list and workplan (reported at IODE XXI);

• Vocabularies - status of GE-BICH IV planned work, submission of vocab lists to SeaVox and future directions from invited experts;

• QA/QC procedures including quality control flags – follow up actions from the first IODE QA/QC chemical workshop; PROPOSED a second workshop.

• Online access and provision of chemical and biological data: survey of the IODE Ocean Data Portal and the SeaDataNet portal;

• Collaboration with GE-OBIS, IOC Intergovernmental Panel on Harmful Algal Blooms (IPHAB) and input to the Harmful Algal Information System;

• Submissions to Ocean Data Standards including Quality Control Flag scheme proposal (on-going review process).
 Gebich V List of Participants

Long Term Members

Herman Garcia (co-chair Gebich V)
Humberto Gonzalez, Chile
Mary Kennedy, Canada
Sergey Konovalov (co-chair Gebich V), Ukraine
Alexander Kouznetsov, Russia
Gwenaelle Moncoiffé, UK
Tori Suzuki, Japan

Invited Experts

Cyndy Chandler, Bco-dmo, USA
Klaas Deneudt, Project Manager Data Centre, (VLIZ), Belgium
Anton Ellenbroek, FAO, Italy
Francisco Hernandez, Manager Datacentre (VLIZ), Belgium
Alex Kozyr, Cdiac, USA
Stephane Pesant, University Bremen, Germany
Ksenia Skuratova, Lead Engineer, Ukraine
Anders Wendelin
Edward Vanden Berghe, Executive Director, Ocean Biogeographic Information System

Secretariat

Mr. Peter Pissierssens
Head, IOC Project Office for IODE, Oostende, Belgium

Herman Garcia, Brief on IODE Gebich activities

For discussion

http://classroom.oceanteacher.org/

Specific items that Gebich as discussed:

1. Update? Marine Parameter Value Ranges
   http://library.oceanteacher.org/OTMediaWiki/index.php/Marine_Parameter_Value_Ranges

2. Gebich feels that our contribution to OceanTeacher could be more efficient if specific chemical/biological information data/metadata gaps and needs were identified.

Gebich could help add/complement courses (examples below):


- Best practices in quality control and quality assurance of oceanographic chemical and biological data (e.g., QC/QA workshop results and ongoing discussion at the Gebich wiki)
ANNEX IX

OT SWOT analysis

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Marine science focus (both data and information management)</td>
<td>• Centralized – high travel costs: also linked to Identified need/Desire for Regional Courses: difficult to organize courses elsewhere (no experience, lack of facilities, poor internet connectivity)</td>
</tr>
<tr>
<td>• Continuous need for training in ocean-related fields of knowledge</td>
<td>• Prospectus – course offers (only CPD focused - MIM): need to offer packages, long time ahead so people can find sponsorship (&gt; 6-8 months); Prospectus to be made available at least 12-18 months ahead; survey annually</td>
</tr>
<tr>
<td>• Distance learning software MOODLE and Wiki style library already operating</td>
<td>• Limited accreditation</td>
</tr>
<tr>
<td>• Course presentations available online (video + ppt)</td>
<td>• Online: time lag between question from students and feedback</td>
</tr>
<tr>
<td>• Centralized (allowing interaction between worldwide participants)</td>
<td>• Digital library maintenance</td>
</tr>
<tr>
<td>• Facilities at IODE PO/Good support system at IODE-PO, including logistics/Excellent classroom facilities, video equipment, IT support</td>
<td>• Follow up mentoring/ Poor follow up by trainers</td>
</tr>
<tr>
<td>• Digital library resource</td>
<td>• Distance learning software MOODLE and Wiki style library already operating BUT NOT FULLY USED: organize a Moodle workshop for the trainers? (only after migrating to Moodle 2.0) &gt;&gt;&gt; faculty training, at least 2 days/year; online tutorial; use sandbox as trainers self training</td>
</tr>
<tr>
<td>• IODE infrastructure with membership including marine libraries and marine librarians and National Marine Information Coordinators, NODC’s and Data Managers</td>
<td>• Performance measurement following courses- long term follow up lacking- how is knowledge applied? &gt;&gt; develop a community of practice groups Etienne Wenger (building connections), develop tasks to bring people together</td>
</tr>
<tr>
<td>• Increasing cooperation with third parties/projects/partnership</td>
<td>• Weak - pre course assignments and contact between trainers-trainees &gt;&gt;&gt; implies long term planning</td>
</tr>
<tr>
<td>• Increasing diversity of Instructors for MIM courses</td>
<td>• No means how to attract new trainers: total reliance on volunteer Instructors – example – NEDCC Northeast Document Conservation Center opportunity not taken because of cost</td>
</tr>
<tr>
<td>• Courses offered as result of surveys conducted in MIM community: societies and IODE community</td>
<td>• Small pool of trainers/ age of trainers &gt;&gt;&gt; need to attract younger trainers &gt;&gt;&gt; current trainers to mentor younger ones: e.g. co-teaching; id people among trainers that could be trainers in the future</td>
</tr>
<tr>
<td>• IODE affiliation with programs such as ASFA and all programs dealing with Data Management</td>
<td>• Funding sources to apply the training received – no time to apply for Grants for specific projects: e.g. 2 years to wait for a reply (related to the IODE capacity building strategy, not OT directly)</td>
</tr>
<tr>
<td></td>
<td>• MIM NC (n=54) not utilized for OceanTeacher or other IODE activities (Linda’s task)</td>
</tr>
<tr>
<td></td>
<td>• Language problems - Non English speaking students</td>
</tr>
<tr>
<td></td>
<td>• Lack of non-English speaking trainers (maybe invite someone from those countries to prime them on those courses); work with Ariel and ?… for Latin America (SP)</td>
</tr>
</tbody>
</table>
Most Instructors not trained in Education – pedagogy, goals, methods, structure: need to build a faculty development plan (long term); TC to organize the community of practice to follow up the post courses?? >>> use the Moodle tools e.g. blog/set moodle discussion groups
•Statistics not readily available for usage of Moodle website and MediaWiki (note: statistics tool working since Jan 2011)

<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>•Regional courses</td>
<td>•Decreasing budgets worldwide and training for capacity building not a priority</td>
</tr>
<tr>
<td>•New training centres (INCOIS, Hyderabad, near future; China; Mombasa?): vision: one TC per ODIN (need to have a profile of TC)</td>
<td>•Funding ceases</td>
</tr>
<tr>
<td>•Training the trainer follow up: id new trainers... and cascading effect/inviting people</td>
<td>•Continuation of separate roles DM and MIM: offering more joint courses</td>
</tr>
<tr>
<td>•Take advantage of any New technologies coming up</td>
<td>•Enduring lack of status of Marine Information Managers: have a communication strategy and implement it (not OT )</td>
</tr>
<tr>
<td>•Partnerships with universities and professional organisations: improving/id more, eg at the level of regional centres</td>
<td>•Volatile human resources in many countries</td>
</tr>
<tr>
<td>•Broader outreach: reaching new training participants, go outside the developing countries</td>
<td>•Succession planning</td>
</tr>
<tr>
<td>•New topics and courses (e.g. OBIS?): operational oceanography (Murray)</td>
<td>•Course saturation</td>
</tr>
<tr>
<td>•New emerging fields of knowledge &gt;&gt; training demand</td>
<td></td>
</tr>
<tr>
<td>•Moodle 2.0 and full use of its new resources/tools</td>
<td></td>
</tr>
<tr>
<td>•Course accreditation</td>
<td></td>
</tr>
<tr>
<td>•MIM National Coordinators unknown capabilities – use them: survey them</td>
<td></td>
</tr>
<tr>
<td>•Annual course needs surveys – need to be regular/automated: devise how to put together the bottom up survey on training needs, include former students, etc</td>
<td></td>
</tr>
<tr>
<td>•Cooperative Data and MIM courses – trans-disciplinary</td>
<td></td>
</tr>
</tbody>
</table>
## ANNEX X

### Actions List

<table>
<thead>
<tr>
<th>Action</th>
<th>Page Reference</th>
<th>To be implemented by</th>
<th>Implementation period</th>
<th>Due by date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide details on courses (learning outcomes, TOC’s, target audiences, etc.)</td>
<td>4-5</td>
<td>Each course lecturer(s) and DM and MIM coordinators</td>
<td>When the course is announced</td>
<td>No later than the period for applications is open</td>
<td></td>
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<tr>
<td>Adapt Marine GIS and Grant Writing course into fully online version</td>
<td>1</td>
<td>DM and MIM coordinators</td>
<td></td>
<td>No later than the end of 2011</td>
<td></td>
</tr>
<tr>
<td>Training needs survey</td>
<td>3</td>
<td>Claudia Delgado + SG</td>
<td>June – July 2011</td>
<td>September 2011</td>
<td></td>
</tr>
<tr>
<td>Develop a set of criteria to select new trainers and launch a call for new OTA trainers</td>
<td>8</td>
<td>Claudia Delgado + SG</td>
<td></td>
<td>No later than the end of 2011</td>
<td></td>
</tr>
<tr>
<td>OT website restructure and improvements (see details in point 4 of report)</td>
<td>3-5</td>
<td>Claudia Delgado + Aditya Kakodkar</td>
<td>June – July 2011</td>
<td></td>
<td>Also Course lecturers as needed</td>
</tr>
<tr>
<td>Explore the feasibility of using Poodle software to provide OTA contents offline</td>
<td>6</td>
<td>Claudia Delgado + Aditya Kakodkar</td>
<td></td>
<td>No later than the end of 2011</td>
<td></td>
</tr>
<tr>
<td>Develop manuals for OT lecturers</td>
<td>4</td>
<td>Claudia Delgado + Aditya Kakodkar + Judith Boettcher</td>
<td>July – August 2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OT migration to Moodle 2.0</td>
<td>5</td>
<td>Aditya Kakodkar</td>
<td>June – August 2011</td>
<td></td>
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<tr>
<td>Application and selection process improvements</td>
<td>4</td>
<td>Claudia Delgado + SG</td>
<td>May 2011</td>
<td></td>
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<tr>
<td>OT/OTA outreach</td>
<td>5</td>
<td>Claudia Delgado + SG</td>
<td>2011-2012</td>
<td></td>
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<tr>
<td>Develop a catalogue of courses and</td>
<td>7</td>
<td>Claudia Delgado + SG</td>
<td>2011-2012</td>
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<tr>
<td>Activity</td>
<td>Priority</td>
<td>Responsible Party</td>
<td>Time Frame</td>
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<td>-------------------------------------------------------------------------</td>
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<td>------------------------------------</td>
<td>---------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop a catalogue of courses and outsource them</td>
<td>7</td>
<td>Claudia Delgado + SG</td>
<td>2011- 2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE-BICH to seek potential lecturers/contributors for OT</td>
<td>6 - 7</td>
<td>Hernan Garcia</td>
<td>Coming months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify content gaps in Digital Library</td>
<td>6</td>
<td>Greg Reed</td>
<td>Coming months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Implement a ‘Data Policy’ course (1 day long) online.</td>
<td>1</td>
<td>Greg Reed</td>
<td>Coming months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Update Alumni system</td>
<td>4</td>
<td>Aditya Kakodkar</td>
<td>Coming months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create templates to harmonise OT presentation of contents</td>
<td>4</td>
<td>Claudia Delgado</td>
<td>Coming months</td>
<td></td>
<td></td>
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<tr>
<td>Develop a policy on how long to keep the courses available online</td>
<td>3</td>
<td>Steering Group</td>
<td>2011 -2012</td>
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<td></td>
</tr>
<tr>
<td>Make the list of participants on each course available (in Moodle and not only via IODE calendar)</td>
<td>4</td>
<td>Aditya Kakodkar</td>
<td>June 2011</td>
<td></td>
<td></td>
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<tr>
<td>Explore other</td>
<td>8</td>
<td>Claudia</td>
<td>2011 -2012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Annex XI

List of Participants

DM and MIM Coordinators:

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Ms. Linda Pikula  
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NOAA Central and Regional Libraries  
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United States  
Email: linda.pikula@noaa.gov

Mr Greg Reed  
Australian Ocean Data Centre Joint Facility Fleet Headquarters  
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Garden Island Potts Point NSW 2011  
Australia  
Email: greg@metoc.gov.au

Invited experts:

Dr. Judith Boettcher a)  
Designing for Learning  
703 587 8892; 850 668 7751  
Tallahassee FL 32312  
USA  
Email: judith@designingforlearning.org  
www.designingforlearning.info  
a) Present between April 11-13th

Dr. Hernan Garcia b)  
Ocean Climate Laboratory NOAA/NODC  
SSMC-III, E/OC5, Room 4306 1315 East-west highway Silver Spring Maryland 20910  
United States  
Email: Hernan.Garcia@noaa.gov  
b) Present by videoconference, April 15th

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Intergovernmental Oceanographic Commission of UNESCO (IOC)  
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