Developing New Standards of Competence for Hydrographic Surveyors and Nautical Cartographers

Alberto Costa Neves (Monaco), Gordon Johnston (UK)
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Towards New Standards of Competence

- Who sets the Standards?
- Membership of the Standards Board
- A future environment for Standards
- Conclusions
The FIG/IHO/ICA International Board

- There are 10 members of the International Board for the Standards of Competence of Hydrographic Surveyors and Nautical Cartographers (the Board).
- The Board represents the 3 sponsoring organisations, FIG, IHO and ICA of which 4 are each from IHO and FIG and 2 from ICA.
- Members are from civil, governmental, and educational sectors and have a wide spectrum of knowledge and experience in education, hydrography, and nautical cartography.
- The members are from different geographical areas.
- The Board meets annually.

The Work of the Board

- Establish and maintain the *minimum* standards of competence described in S-5 and S-8.
- Maintain publications (S-5, S-8, S-6, S-47)
- Review syllabi and provide advice on syllabi at the Category A or B level
- Review procedures on submission of syllabi
- Review ongoing Competency Assessment Schemes
- Inform the sponsoring organisations of its work.
Recognised Courses are Balanced

The Standards need to reflect an up to date set of requirements as well offering a basis for a surveyor to make progress.

The Standards must maintain the balance for students and their employers whilst allowing for the new digital learning experience.

The Standards of Competence

- Establishes requirements for educational programs for hydrographers and nautical cartographers
- Describe competencies that students should master in terms of a learning outcome.

**Uses Bloom’s Taxonomy**

- Considered by the Board as *minimum* Standards
- The syllabus content is described but NOT how to deliver, or what time should be spent or how to manage the training course.
The Standards of Competence

- The Standards S-5 & S-8 are aimed at ensuring academic or training courses produce suitably qualified individuals. It comprises of:
  - 3 Knowledge Levels: Fundamental, Practical & Detailed
  - 2 Groups of Subjects: Basic & Essential
- Educational and training programs levels are:
  - Category A
  - Category B

Updates and Maintains the Standards
- S-5 Hydrography & S-8 Nautical Cartography

http://www.iho-ohi.net/iho_pubs/IHO_Download.htm
Status of Survey Coverage: IHO C-55

Cumulative percentage of entries against A1
(percentage of the navigable area adequately surveyed)
Depth < 200 m

- A1 ≥90%
  14% entries
- A1 ≥50%
  1/3 entries
- A1 ≤ 10%
  36% entries

The Training Landscape

- In the Arctic there is NO recognised course (except for 3 in USA).
- The whole of Africa only has the Category B course in Tunisia.
What are the developments?

- The Board wishes to develop the Standards……
- We have started a significant update of the S-5 and S-8 Standards with the revision aiming for major new editions in 2013-14.
  - The creation of a separate Category A and B syllabus
  - Modules rather than courses
  - Learning methods and techniques
  - Learning outcomes updated: “Constructive alignment”
- The work to develop new Standards will involve consultation with industry and our sponsor organisations to progress appropriate Standards.

Status of Recognised Training
Effective Education

- Partnering with software & equipment providers as well as survey companies & organizations
  - Important to bring hardware and software into the curriculum and access up to date knowledge and experience
  - Investment in a future sustained capacity through people

In Conclusion

- I wish to acknowledge the support of IHO, FIG & ICA.
- The Standards now include systems to recognise the programmes that assess the competency of Individuals. We need more of these.
- New Standards shall be developed in consultation
- You are invited to contribute especially with regard to new learning methods and the trend for modules.
- Many parts of the world still lack access to qualified surveyors so the work of the Board must continue.
Questions?

Contact details:
IHO (IBSC): http://www.iho.int/srv1/
FIG: www.fig.net
Gordon Johnston: gordon.johnston1@orange.net

Thank You!