SYMET-14: Education and Training in a Period of Rapid Change

WMO Symposium on Education and Training

Work Plan Template #4

Theme #4: Considering new pedagogical approaches and assessment methods, including the future uses of blended learning (Co-Chairs: Bernie Connell, CIRA, WMO-CGMS VLab, and Noer Nurhayati, BMKG)

Background to the theme:

- *The value of "learning by doing" has been promoted in pedagogies for at least the last one hundred years. In recent decades, this challenge to traditional "learning by knowledge transmission" has prompted a growing number of new pedagogical approaches.*
- *Learning by doing forms the basis of competency-based training, as promoted by WMO, by offering practice and feedback in applying new knowledge and skills in job-related activities.*
- *New pedagogical approaches are based on the introduction of a variety learning activities, such as using the classroom for practice and feedback instead of information transfer (as in blended-learning), project- an problem/inquiry-based learning for providing active and authentic contexts for developing knowledge and skills, collaborative learning that encourages student groups to actively support one another in their learning, case-based learning and simulations, guided discussions, and other approaches.*

Example Goals/Desired Outcomes (to be prioritized, enhanced, adjusted or replaced by the Working Group to ensure a manageable discussion):

- *New and diverse pedagogical approaches are tested and adopted for addressing the needs of diverse learners and to aid in developing complex knowledge and skills*
- *Successfully tested pedagogical approaches are documented and shared with other education and training institutions.*
- *Traditional and culturally appropriate pedagogical approaches continue to be respected alongside new pedagogies.*
- *Both classroom and online learning delivery modes are enhanced with active pedagogical approaches that help learners develop and practice targeted competencies.*

- *New forms of formative (during training) and summative (end-of-training) assessment are used that reinforce learning and confidently demonstrate achievement of targeted skills and knowledge outcomes*
- *Perceived weaknesses in online learning assessment are mitigated by applying new strategies and technologies.*
- *Classroom and online delivery modes are combined in ways that maximize learning opportunities.*

Questions to consider in discussing workplans (challenges to address, barriers to action, tasks to complete, resources required, etc.) Groups are encouraged to use these prompting questions or choose others to stimulate discussion:

- *What cultural and practical barriers must be overcome with both teachers and students to adopt new pedagogical approaches?*
- *How should new pedagogical approaches useful to WMO education and training providers be identified, compiled and examples shared?*
- *How can increased institutional collaboration enhance awareness and willingness to try new pedagogical approaches?*
- *What are the most compelling reasons to use classroom, online, or blended learning delivery modes? (Note these do not directly constitute pedagogies, but they can influence our choice of pedagogies.)*
- *What pedagogical approaches are most conducive to skills development?*
- *How can formative assessment be used to maximize learning during training?*
- *What summative assessment methods produce the most valid indicators of various types of learning (such as background knowledge versus skills)?*
- *How can we enhance online communication and interaction for more effective and engaging learning experiences?*

Group Discussion Prompts

Challenges (What barriers exist to achieving goals?):

Opportunities (From what examples can we learn? What existing initiatives can be drawn from?):

Collaboration (How can collaborative action contribute?):

What steps might be required?:

Who is willing to take responsibility to contribute? What contributions the can offer):

Recommended Actions (Which recommendations does the group propose that could meet the chosen goals and contribute to the SYMET Statement?):