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| ***Activity Type:* Collaborative Decision Making** |
| ***Learning Solution Type:* Asynchronous online learning** |
| ***Assigned Topic*: Aeronautical observers** |
| ***Team Name:* Cumulonimbus (Roro Yuliana)** |
| ***Title of the activity:***  **CALMET - C**reating **A**ccurate **L**earning in **MET**ar (Producing clear and accurate METAR using suitable terminology for a variety of weather conditions**)** |
| ***Instructions to students*** *(what do they need to know to participate in the activity, how are they grouped, how will outcomes be shared for feedback)*  **Student -** 20 junior observers just completed their first year (2 semesters) in Academy and have been placed in remote areas as junior aeronautical observers. In this 2nd year, they are in the period of off-campus on-the-job-training. They will return to campus for their 3rd and 4th years before graduating as forecasters. Keeping them in a “training environment” will keep them engaged with learning. During the training period, they will be coached by the observation coordinator in their station. The observation coordinator will also monitor and motivate them to improve their skills.  As an aeronautical observer, the students are expected to be clear and accurate in producing METARs using suitable terminology for a variety of weather conditions. They learned some basic knowledge while at the academy; now it is time to practice and apply that knowledge.  They are placed in remote areas to support the operational work and will not have access to visit the training center but are still expected to be engaged with the learning process.Providing online learning is the best solution to meet their learning needs. Remote areas usually still struggle with internet connectivity. Students are also tied to a fixed schedule and shifts so asynchronous will be the most practical solution to meet their scheduling needs.    **Learners initial level of preparation** - Students have knowledge on some basic meteorology and can understand different weather conditions. They had some experience writing METARs in 2nd semester while at the academy.  **The competencies:**   * Develop an awareness of the uses and impacts of their METARs * Write clear and accurate METARs using suitable terminology for a variety of weather conditions * Enhance efficiency in producing METARs |
| ***Roles of trainers*** *(how will you set up and guide the activity)*  The trainer will develop a series of learning activities as a self-directed, 3-part course in Moodle.  Part 1:  Activities include taking the following MetEd lessons: Nowcasting for Aviation in AfricaWriting TAFs for Convective Weather, 2nd EditionWriting TAFs for Ceilings and Visibility, Africa EditionWriting Effective TAFs in the Caribbean Since these lessons are somewhat tailored to the needs of African forecasting, the instructor will need to prepare study guides to help direct the student to the most relevant material in the lessons and provide information that addresses local forecasting needs.  Part 2:  The focus is on writing and reviewing METARs. The instructor will provide several case scenarios for the student to analyze and write METARs. Each METAR is submitted to a forum and reviewed by at least 2 other students for feedback. Peer review serves to provide feedback to the METAR author while forcing reviewers to look analyze METARs for accuracy. The instructor should provide final feedback to each submitted METAR with specific feedback on accuracy of forecast and format. If time efficiency is a factor, several of these exercises could be constructed in such a way that access to the case scenario data is controlled with a timer (perhaps making use of the KMNI case simulator).  Part 3:  This part focusing on assessment. Again, the instructor will provide case scenarios for the students to write METARs. Since this is for assessment, submissions will not be shared with other students. The instructor should provide feedback to each submitted METAR with specific feedback on accuracy of forecast and format. |
| ***Supporting resources*** *(what data, instructions, technologies, instructional resources, etc. will be required)*   * PC with internet connection * METAR/TAF List of Abbreviations and Acronyms : [*http://www.wrh.noaa.gov/wrh/metar\_decode\_key.pdf*](http://www.wrh.noaa.gov/wrh/metar_decode_key.pdf) * any other supporting materials (lectures, manuals) ie material for technical training course on aviation meteorology - Indonesia only. |
| ***What is the primary thing you want students to learn?***    **Facilitator goal :**   * Checking knowledge/ understanding of the students about METAR, its code, abbreviations and acronyms, * Checking skill/ how student able to write the clear and accurate METAR and translating/ transforming from variety weather condition to the METAR codes and vice versa   **Learning goal** - Mastering to write the clear and accurate METAR for variety weather condition, in the short time. |
| ***How will you know if the activity was successful?***    It could be done by the facilitator or coach :   * how much has been done (by the facilitator) * the performance of the students within the activity (by the facilitator) * active in discussion forum (asking the related questions, provide feedback to other students, sharing tips and the new trick they use in remembering the METAR codes) * timing * correctness (first, by the students, finally - by the teacher, who has to be an expert) * Feedback by coach |
| ***Any additional notes you want to include.***  It is a very basic knowledge and skill that have to be mastered by the aeronautical observers. They might need some exercises to be a master in writing METAR, so the product will be clear and accurate and produced in a short time. Teacher and coach could share their tips and trick in remembering the complicated code in such a relatively short time (will the METAR grouping activity help?) |