

A Review of MPL Program and USRT

- Presented by:

Capt Wuhib Seife

(Mgr. MPL & Cadet Training Flt operations)

- **Capt B-737-700/800NG**

(TRI/TRE)

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MPL Philosophy

- MPL (Multi-crew pilot license) is a competency based Training which demands competency on the part of the Trainee to pass from one phase to the other phase. Besides, it challenges the Trainee to research and equip themselves well on the subject because 80% of the preparation on the subject matter demands hard work on the part of the Trainee.

MPL Philosophy

- As an MPL trainee, the student will have 870 hrs of ground training ,80 hrs of flight training on DA-40NG FTD,20 hrs of flight training on DA-42NG FTD (Twin engine) and fly 96.5 hrs of actual aircraft on DA-40 NG and DA-42 NG at the aviation academy before going to flight operations training department for further training.

MPL Philosophy

- In flight operations training department, the trainee will be given a 100 hours of pilot flying and another 100 hours of pilot monitoring training on type specific FSTDs.
- That will give the trainee a smooth transition to line training.

MPL Philosophy

- By concentrating on the core competencies of pilots of modern jet transport aeroplane the training is structured according to the competency based approach method emphasizing the aspect of multi-crew operation from the very beginning of the training.

MPL Philosophy

- **Competency Based Training:-** is an education/training concept that is learner/participant centered and in which the unit of progression is mastery of specific knowledge and skills.

MPL Philosophy

- Current flight is made in a complex flight region with airplanes equipped with modern, state of the art technology that requires a completely different skill, knowledge and attitude.
- Traditional pilot training requires an extensive bridge program to the modern fleet.

MPL Philosophy

The New Pilot Training Program: MPL

- MPL stands for Multi-Crew Pilot License
 - an alternative approach to traditional pilot training,
 - concentrates on very specific training for line operations in modern transport aircraft
- MPL programs incorporate ab initio, bridge and type rating training,
- Emphasizes crew resource management and operations in a multi-crew environment

MPL Philosophy

“MPL represents a state-of-the-art ab-initio airline pilot training program that focuses from Day One on preparing the co-pilot candidate for the right seat of an advanced airliner, using a competency-based approach to training developed with an emphasis on improving flight deck safety”

ICAO Journal Volume 62, Number 3, 2007

MPL Philosophy

Privileges of MPL

- Allows a pilot to exercise the privileges of a co-pilot in a commercial air transportation on multi-crew airplanes
- Privileges of a MPL are equivalent to those of CPL endorsed with an instrument rating and a type rating on a multi-crew aircraft
- MPL Provides the aviation community with an opportunity to train pilots directly for co-pilot duties of any multi-engine, multi-crew commercial airliner (Integrated training).

MPL Philosophy

The MPL Training Concept

- The training is competency based
- Unit of progression is acquiring the required competencies (Skills, Knowledge and Attitudes)

MPL Philosophy

- Among the change that MPL would effect are:-
- Very specific training oriented towards line operation in modern jet transport.
- A greater emphasis on the use of flight simulation training device.
- Concentrated threat and error training, and
- Mandatory upset recovery training.

MPL Philosophy

MPL Competency Criteria

1. Apply Threat and Error Management (TEM) Principles
2. Perform ground and pre-flight operation
3. Perform take off
4. Perform climb
5. Perform cruise
6. Perform descent
7. Perform approach
8. Perform landing
9. Perform after-landing and post-flight operation

MPL phases

PHASES

Core

Basic

Intermediate

Advanced

IOE

Licence Issue

IOE-Initial on line experience

Why MPL@ET

Drivers of New Pilot Training Program

- Air transport safety concern
- Quality of Training
- Advances in Fleet Technology
- Advances in Simulator Technology
- Increased demand for Pilots
- Environmental Concerns
- Cost
- Reduction of Training Duration
- Regulations

Inception of MPL at ET

Ethiopian Airlines is the first and the only airline to start MPL training in Africa after the feasibility study was performed by Ethiopian aviation academy staffs. The aviation academy made an agreement with flight path international and started training the first class (MPL-1) on October 10, 2011.

Inception of MPL at ET

- The agreement made shows that Flight Path International conducts Academic training fully by themselves while the Flight Training was agreed to be conducted by Ethiopian Airlines Pilot Training School Flight Instructors. However, MPL Instructional Technique Training was given to the Instructors.

Inception of MPL at ET

- For the second class of trainees Ethiopian Airlines pilot training school technical instructors conduct the training under the supervision of Flight Path International. Then after, for the Third class, Ethiopian Airlines Aviation Academy Technical Instructors take over fully and started conducting the training independently.

Challenges

Ethiopian airlines aviation academy has faced so many challenges as far as introduction of MPL training to Ethiopian airlines is concerned. The major challenges that the academy faced are:

- The resistance of the ECAA in regard to promoting MPL holders to a higher equipment;
- The problem of getting readymade training devices from the venders which made the training sluggish;

Challenges

- The problem faced by the training department with regard to conducting instrument training around Addis Ababa due to heavy traffic;
- Problem of finding suitable training area to avoid delay caused to the training due to traffic;etc
- MPL is only implemented for B-737 (Very soon it will be implemented On Q-400)

MPL Experience @ ET

- Based on the data collected from the aviation academy, Ethiopian airlines graduated 134 MPL trainees which visibly showed the success of the aviation academy regarding MPL training.
- The aviation academy also gives training to CPL students in conjunction with MPL training.

MPL Experience @ ET

- We have 93 MPL trainees in the aviation academy including 18 trainees in flight operations training department.
- Ethiopian airlines aviation academy Owns three DA-40 and DA-42 FTDs; one C-172 FTD on the way and ten DA-40NG; two DA-42NG (twin engine) and nine C-172 excluding two DA-40NG on the way from veina as we speak dedicated for either CPL or MPL training with 55 highly trained and qualified instructors out of which nine of them are ground instructors.

Advantages of MPL training

- Avoid unnecessary learning and de-learning
- People skill is taught from the beginning
- Focus on multi-engine/IFR in high workload environment
- Better scheduling on simulator
- Less waste of time after pilot school
- Reduces environmental impacts by reducing actual airtime

Advantages of MPL training

- MPL improves training quality hence operational safety
- We can train qualified first officers for any equipment at the outset based on our need
- Airline culture and SOP is learnt from the beginning of the training
- We can avoid the traffic congestion at Addis Ababa Airport
- Employ early integration into glass cockpit and Flight Management Systems operations
- The training is more goal oriented

Upset prevention and recovery training

- Airplane upset. An airplane in flight unintentionally exceeding the parameters normally experienced in line operations or training, normally defined by the existence of at least one of the following parameters:
 - a) Pitch attitude greater than 25 degrees, nose up;
 - b) Pitch attitude greater than 10 degrees, nose down; or

Upset prevention and recovery training

- c) Bank angle greater than 45 degrees; or
- d) Within the above parameters, but flying at airspeeds inappropriate for the condition

In several instances UPRT is not optional. It is a requirement for the MPL training.

A large portion of a fully integrated UPRT programme involves the training of flight crews in a simulated environment.

Upset prevention and recovery training

- Regardless of an individual's background, all instructors designated to provide training in a UPRT programme should successfully complete an approved UPRT instructor qualification training course.
- In Ethiopian airlines aviation academy, trainees take the following trainings on actual as well as on FTDs:

Upset prevention and recovery training

- a) Unusual attitude recovery techniques:
- b) Spiral dive recovery techniques; and
- c) full stall recovery in conjunction with approach stall and departure stall recovery techniques on the basic training phase of the MPL training.

Upset prevention and recovery training

- In flight operations training department, the trainee will have upset recovery trainings in simulated environment starting from stage seven until completion of the training. This will enable the trainee to effectively manage those conditions of flight which are likely to increase the risk of an upset or those conditions during which an actual upset has occurred so that a safe condition of flight can be restored without undue delay and risk.



The way forward for ET

- As everybody is aware of, Ethiopian airlines is one of the fast growing and successful airline in the world. The last ten years, Ethiopian airlines has increased its number of aircrafts and routes significantly.
- For this reason, Ethiopian needs a lot of well trained pilots ready to fly as first officers on different types of aircraft
- MPL programs has proved itself as a 'modern approach' to training copilots for airline operations.



The way forward for ET

- Refining the training in areas of ground course trainings, the need for a more rigorous MPL instructor trainings, continuously studying the progresses achieved and identifying the possible shortcomings,
- Reinforcing current trends and successes observed concerning the time taken to complete the training

The way forward for ET

- Implementing the MPL program for the Q400 (already under process)
- Harnessing the full benefits of the MPL concept
- Initiating open discussions and guided discussions by all stake holders to clear misconceptions and bias
- Incorporating the suggestions and opinions of line pilots continuously