A Study on Transnational Mission Crew Management

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ABSTRACT

With ever growing co-operation between international communities in the field of space science & technology, today's space operations often involve close co-working of people with different ethnical, professional and organizational backgrounds. The implications of cultural diversity for efficient collaboration between the personnel stress on four factors associated with challenges in interaction: Management, Compliance, Communication, and Competitiveness.

It is a widely accepted fact that cultural factors pose additional risk to the success of long-duration spaceflight (LDSF). Inadequate language competence will manifest itself in miscommunication during crew interactions and will ultimately lead to operational snag. Thus, goal is to suggest possible ways of reducing the risks and uncertainties associated with cultural and language factors.

Considering the potential cost of human error in operational settings, which may be due to cultural or language miscommunication, it is undisputable that measuring cognitive performance is a relevant challenge. The need for a robust remote assessment method for cognitive performance has been specifically ranked as a research priority for the preparation of exploration missions.

According to a recent study on astronaut's psychological analysis after a mission, the feeling of cultural isolation and interpersonal incidents during the mission were more common than psychological or negative incidents.

Yet, another established fact that a team's success in coping with a crisis situation largely depends on the team's composition, such as, national origin, gender, historical period of spaceflight, longest flight, and nationality status (minority or member of the majority of the crew).

In order to recompense above problems, a efficient Crew Resource Management (CRM) training program has to be designed and adopted to improve flight safety through better teamwork, good-communication, situational awareness and superior decision-making ability.

This study is intended for further help the employees working in international space program teams.