Talent Management Analysis for the Air Wing of the Future

NPS — NAVAL POSTGRADUATE SCHOOL

Abstract

The Air Wing of the Future (AWOTF) will provide unmatched lethality and capability in future theaters of operations. The addition of the F-35C Lightning II, MQ-25 Stingray, and CMV-22B to the combat proven team of F/A-18E/F Super Hornets, EA-18G Growlers, E-2D Hawkeyes, and MH-60R/S Seahawks also comes with increased manpower support requirements over today's carrier air wing. The increased complement of personnel necessary to operate the AWOTF will either require a multimillion-dollar ship modification to the baseline design, or a reduction to the individual squadron manpower documents. The objective of this capstone was to analyze manpower talent management, maintenance training, and squadron-level maintenance activities to determine whether a training improvement solution could substantiate a manpower reduction by creating a higher-quality, more capable work force. The culmination of this research did not strongly validate any recommendations for reduction of manpower requirements due to limitations in the available data, but did demonstrate marginal benefits in the form of increased labor production efficiency among a higher-quality work force (as defined by Aviation Maintenance Experience [AMEX]). There is a clear signal for the value of AMEX in detailing activities as well as greater unit-level training capabilities.

CVW-9 Air Power Demonstration, 2016.
Photo Credit: Author

Methods

- Identify like-squadrons in AMEX 2.0 data, fit-fill data, DEMOT data, flight-hours, and maintenance man-hours data.

- Determine the lot number of squadron aircraft and find similar lot aircraft squadrons for comparison.

- Using deployment scheduling, determine what months corresponded to the Maintenance, Basic, Integrated, and Sustainment phases of OFRP for the respective squadrons.

- Use fit-fill data to determine manning levels.

- Prepare a spreadsheet containing aggregated data for each squadron as a basis for comparison.

- Analyze the spreadsheets to identify trends within the data.

$y = 1055.4x^{-0.777}$
$R^2 = 0.7245$
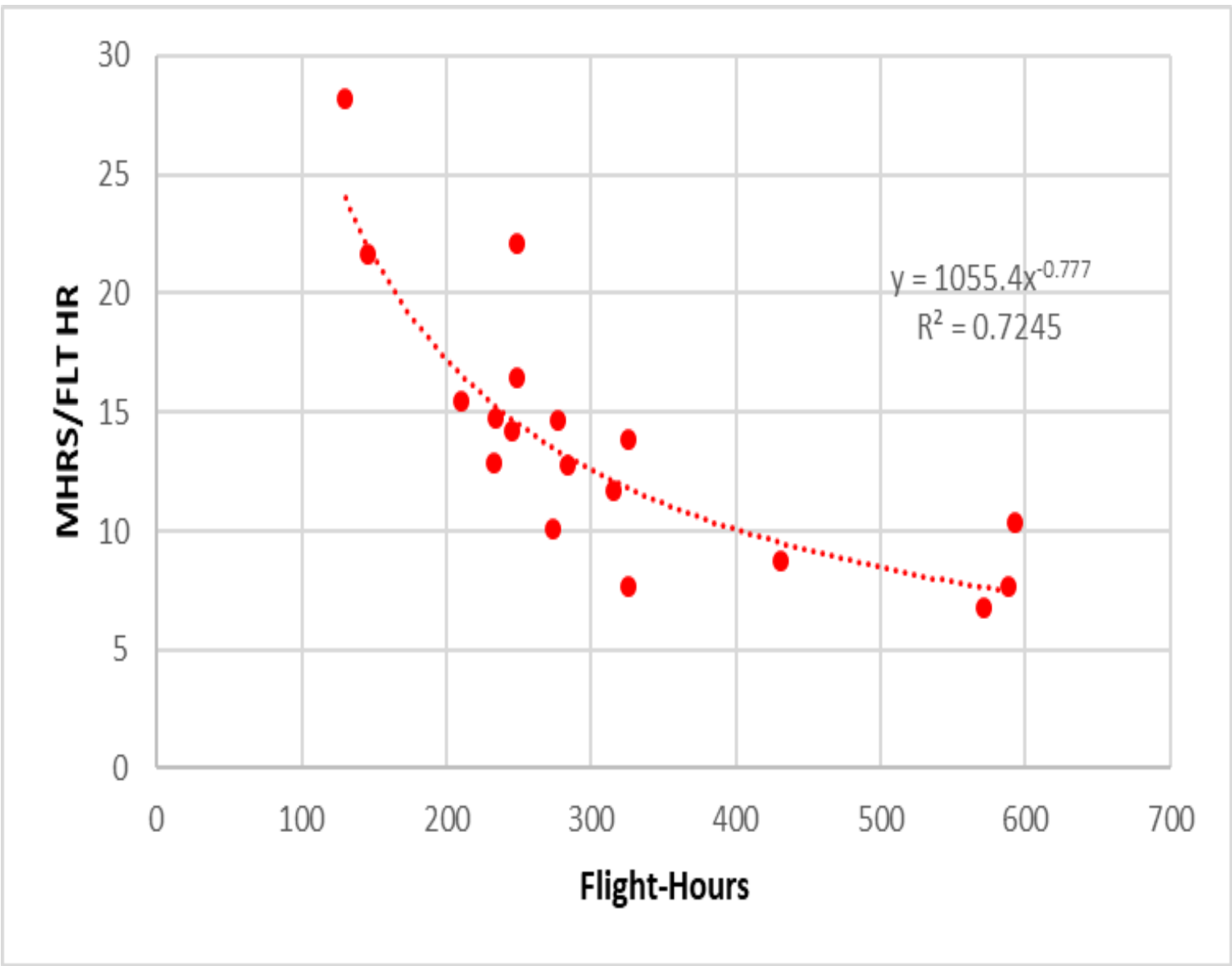
Results

- Results do not support reduced manpower purely based on quality as defined by AMEX 2.0

- Marginal reduction in Maintenance Man Hours per Flight Hour supports recommendation for continued investment in squadron level training systems to increase T/M/S familiarity and qualifications

Light Division of Super Hornets entering the Carrier Break. Photo Credit: Author

Aviation Machinist's Mate moves a jet engine to the test stand. Photo Credit: Tristan Kyle Labuguen

Aviation Structural Mechanic conducting maintenance. Photo Credit: Elliot Schaud

EA-18G Growler in the marshal stack. Photo Credit: Author

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