

Aug 14th, 10:30 AM - 11:45 AM

Examining the Different Learning Strategies Between Extroverts and Introverts Among Flight Students at Embry-Riddle Aeronautical University

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Brooks, John R., "Examining the Different Learning Strategies Between Extroverts and Introverts Among Flight Students at Embry-Riddle Aeronautical University" (2018). *National Training Aircraft Symposium (NTAS)*. 21.

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EXAMINING THE DIFFERENT LEARNING
STRATEGIES BETWEEN EXTROVERTS AND
INTROVERTS AMONG FLIGHT STUDENTS AT EMBRY-
RIDDLE AERONAUTICAL UNIVERSITY

John Brooks

INTRODUCTION

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INTRODUCTION

What is the Problem?

What is the Purpose of this Study?

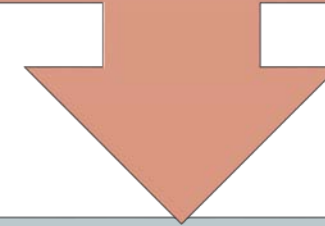
What is the Significance of this Study?



HYPOTHESIS

Research Question:

Do participants comprehend information better when they learn it with strategies that match their personality type?



Hypothesis:

Receiving briefing material in the medium that *agreed* with their personality types (oral with extroverts & written with introverts) would perform better than those receiving the briefing material opposite their personality types.

METHODOLOGY

1

Selection Process

- Over 18
- At least 10 hours flight experience
- NO IFR training

Size

- 16 Participants

The Results

- Results may be generalized to any population of student pilots and/or their instructors at any kind of flight program

POPULATION/SAMPLE

ASSIGNMENT TO CONDITIONS

2 Extroverts, 2 Introverts in each group

2 x 2 Design (2 groups & 2 treatments)

Instructional Medium: Oral vs. Written

DME Written
Hold Oral

Group 1

Hold Written
DME Oral

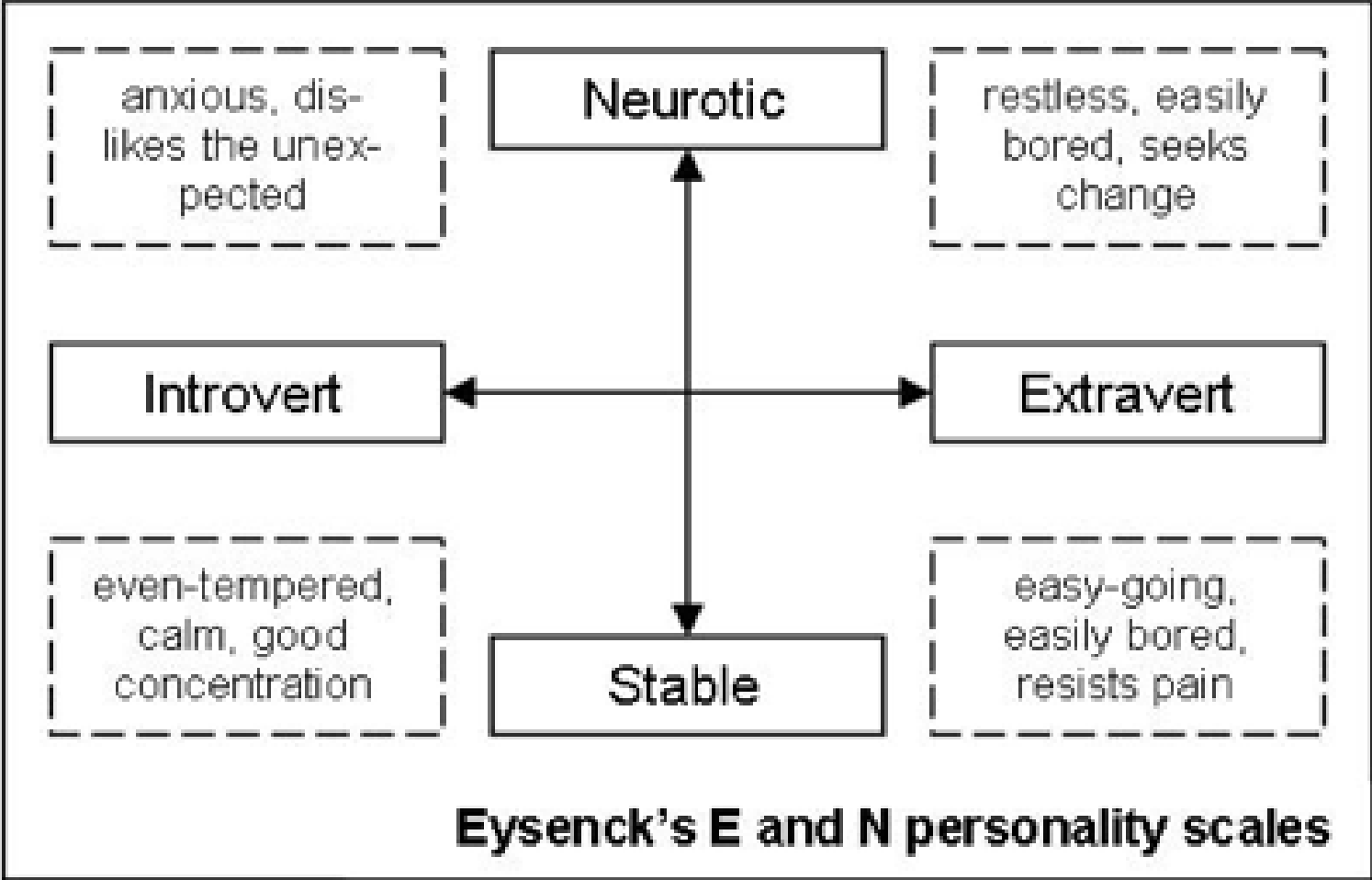
Group 2

DME Oral
Hold Written

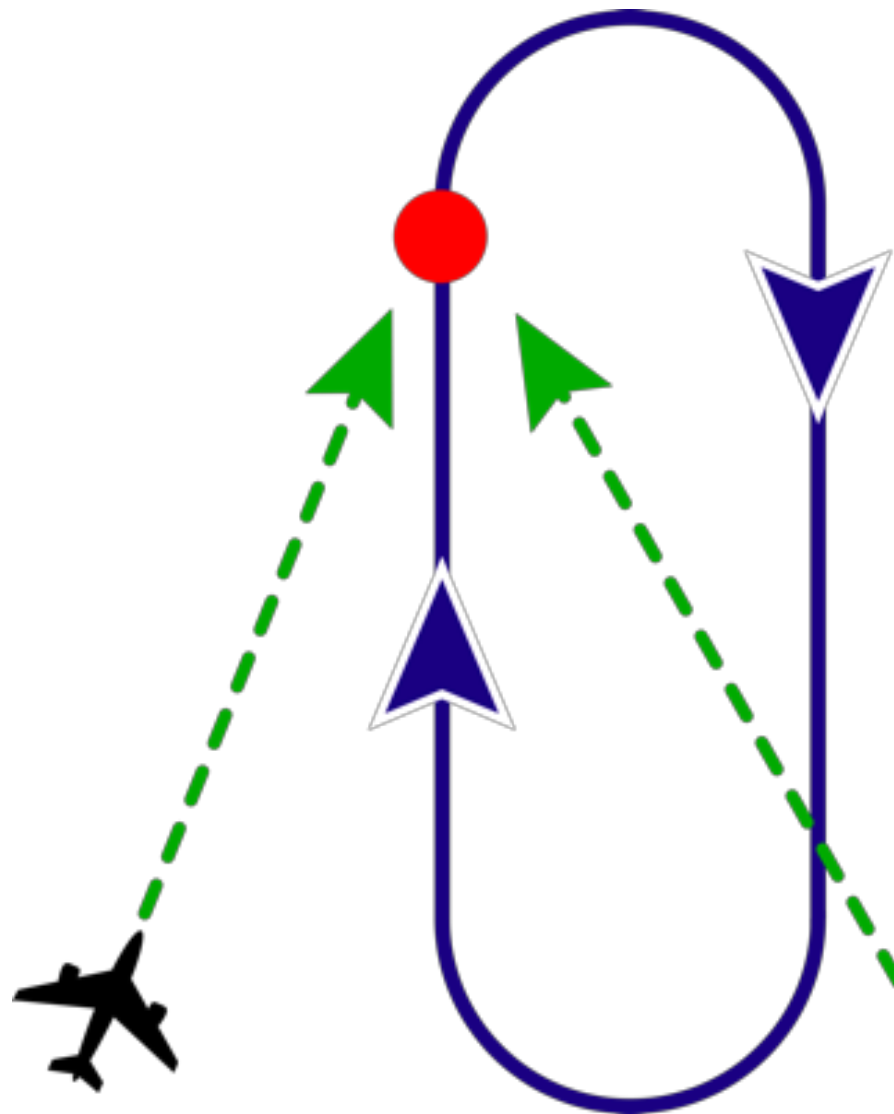
Group 3

Hold Oral
DME Written

Group 4

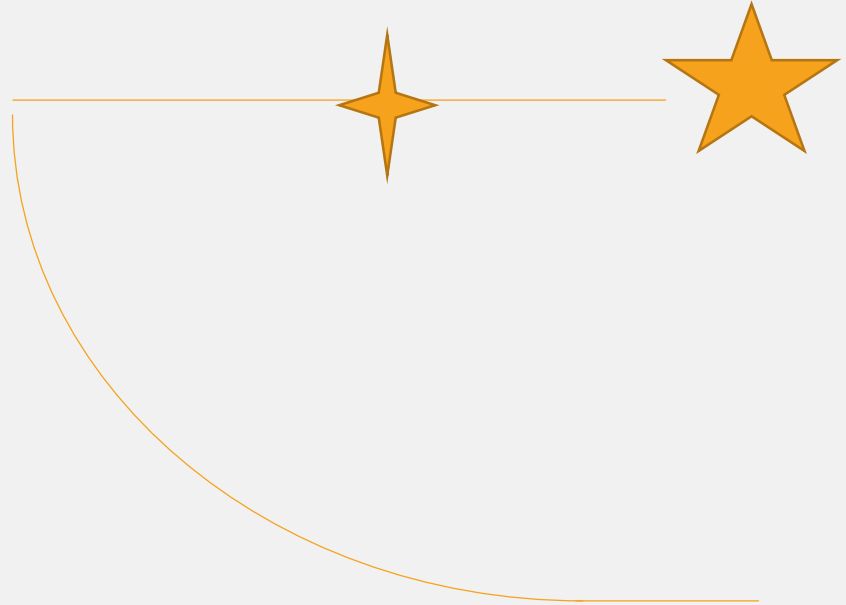


MANEUVERS:
DIRECT
ENTRY HOLD



MANEUVERS: DME ARC

270
degrees



180
degrees

RESULTS

1

Avg Dist Avg Alt

Introverts did the worst at Hold oral (4.80) 2890.8
2nd worst at DME oral (4.90) 2921
2nd best at DME written (5.43) 3030.2
Best at Hold written (5.47) 3016

Extroverts did worst at DME written (5.25) 3044.3
2nd worst at DME oral (5.42) 3014.9
2nd best at Hold written (5.52) 2966.7
Best at Hold oral (5.53) 3015.7

Timing on 'read' portion of written instruction (120 seconds maximum)

Introverts: 119 Seconds

Extroverts: 47 Seconds

***No other comparisons were statistically significant**

DISCUSSION

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INTERPRETATIONS

Introverts success closely linked to the type of teaching medium across maneuver types

Extroverts did mostly the best with oral instruction

Extroverts achieved significantly greater performance than **Introverts**

RECOMMENDATIONS

Application
in aviation
education



Application
to broader
educational
institutions

LESSONS LEARNED

Differentiate altitudes

More precise form of measurement

Result change with more lessons?

THANK YOU!
QUESTIONS?

Maneuver	Sig(2-tailed)	Standard Deviation Extro	Standard Deviation Intro	Extrovert Mean	Introvert Mean
Hold-oral Dis	.003	.047	.263	5.53	4.87
Hold-Oral Alt	.311	44.09	221.6	3015.77	2890.8
DME-oral Dis	.158	.05	.55	5.42	4.97
DME-oral Alt	.625	45.1	360.5	3015.95	2921.4
Hold-read Dis	.654	.15	.15	5.52	5.47
Hold-read Alt	.410	96.8	56.3	2966.72	3016.35
DME-read Dis	.343	.337	.125	5.25	5.43
DME-read Alt	.930	300.9	58.8	3044.30	3030.22