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

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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?

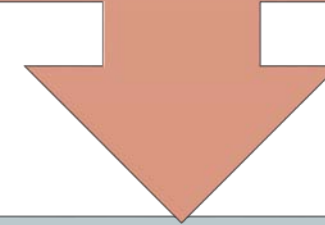
What is the Significance of this Study?



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

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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

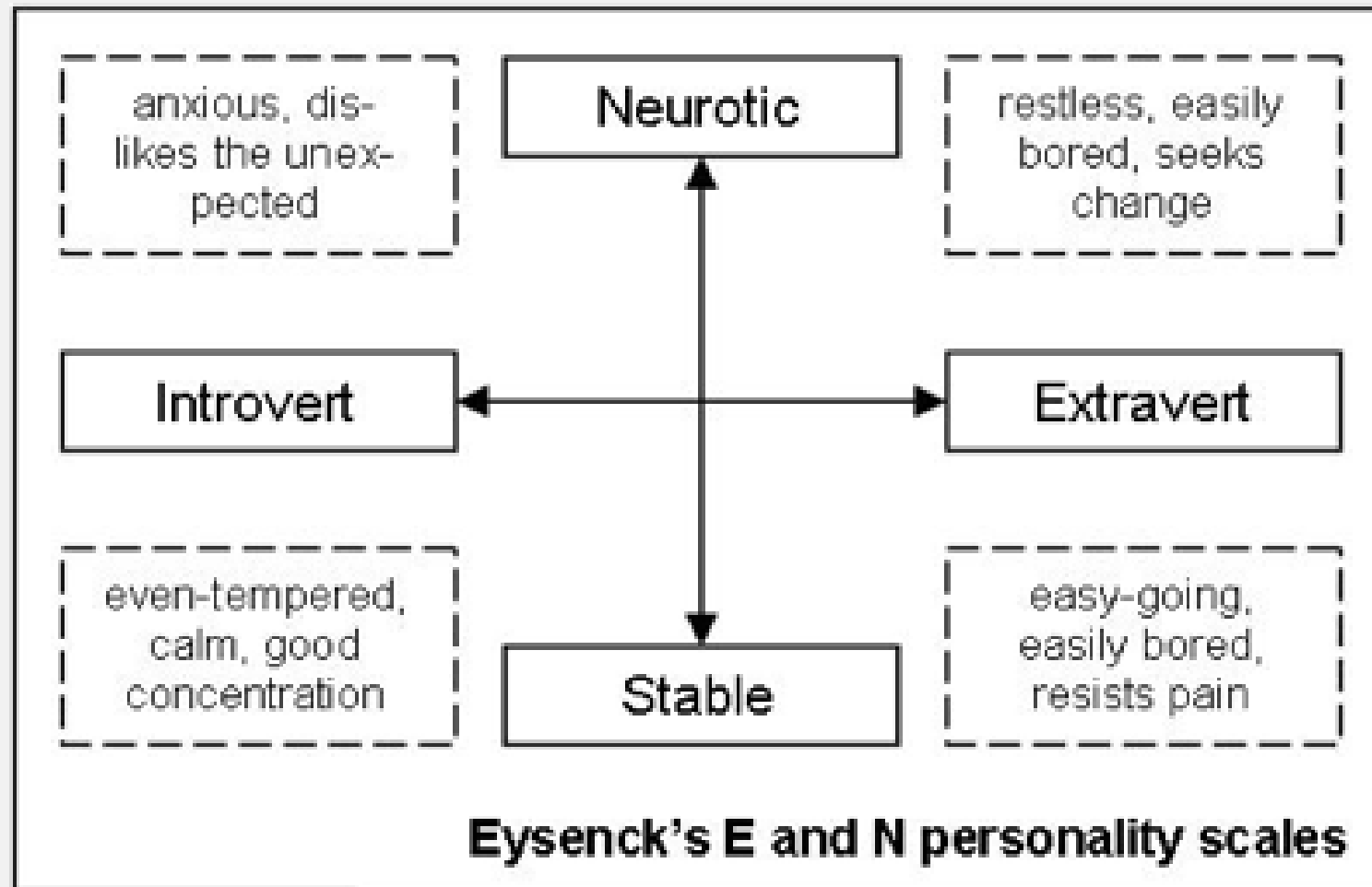
Group 2

DME Oral
Hold Written

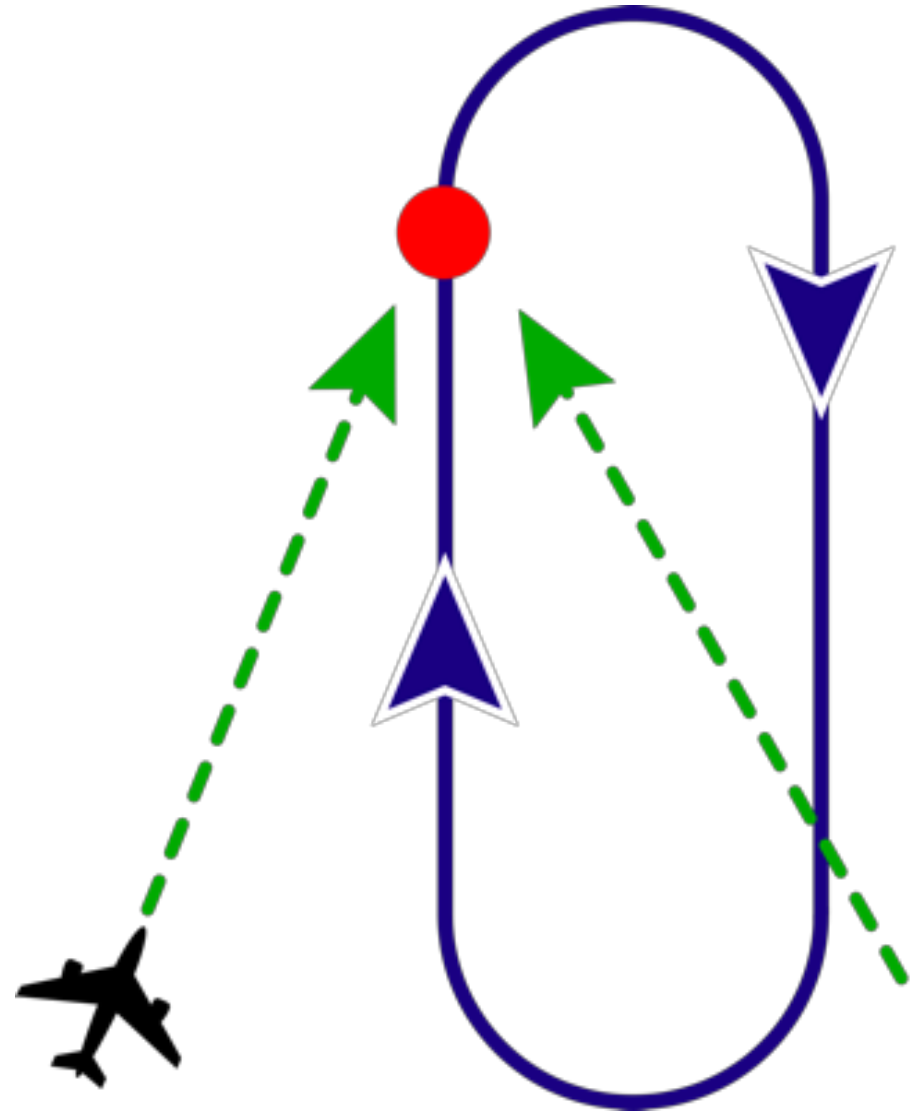
Group 3

Hold Oral
DME Written

Group 4

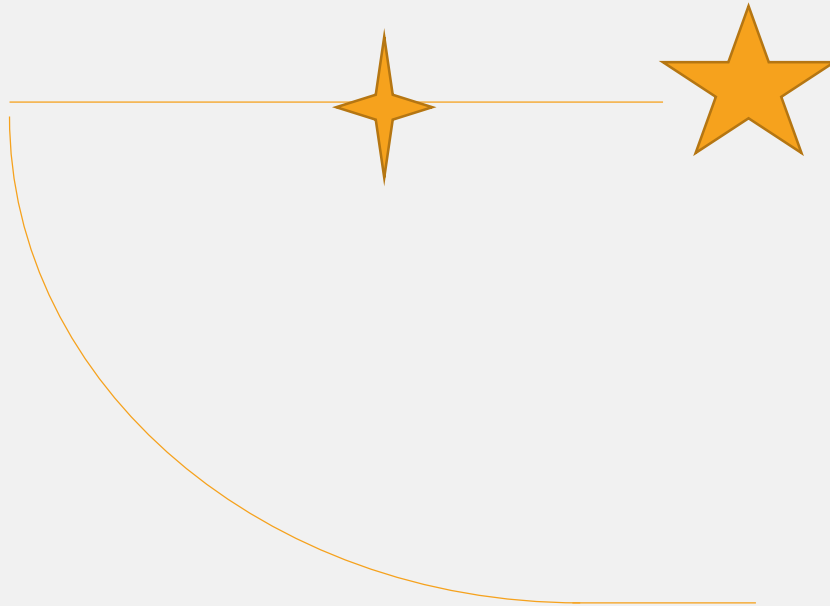


MANEUVERS:
DIRECT
ENTRY HOLD



MANEUVERS: DME ARC

270
degrees



180
degrees

RESULTS

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	<u>Avg Dist</u>	<u>Avg Alt</u>
Introverts did the worst at Hold oral (4.80)		2890.8
2 nd worst at DME oral (4.90)		2921
2 nd 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
2 nd worst at DME oral (5.42)		3014.9
2 nd 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