

15/19/822
Liberal Arts and Sciences
Psychology
Air Crew and Technical Specialists Personnel and Training Research File, 1951-55

Box 1: 1951-55

University of Illinois Contract No. AF 33(038)-25726; Final Report; Lyle H. Lanier, Principal Investigator includes appendix A-H (final report for tasks A-H), corresponding to following folders

- A-1 Eugene L. Gaier and Marilyn C. Lee, Test Response Patterning - August 1, 1952
 - A-2 Eugene L. Gaier, Marilyn C. Lee, and Louis L. McQuitty, Response pattern in a Test of Logical inference, Oct. 2, 1952
 - A-3 Louis L. McQuitty, Charles Wrigley and Eugene L. Gaier, Approaches to the prediction of Job Success; I. The Descriptive Inventory, 25 February, 1953
 - A-4 Harry M. Mason, A Classification of Test Items for Measuring Job Knowledge of Airplane and Engine Mechanics, May 12, 1953
 - A-5 Eugene L. Gaier and Marilyn C. Lee, The Effect of Item Difficulty Level on Patterns of Response, 26, June 1953
 - A-6 Jack O. Neuhaus and Charles Wrigley, The Quadrimax Method: An Analytic Approach to Orthogonal Simple Structure, August 5, 1953
 - A-7 Charles Wrigley and Walter A. Cleven, The Large-Scale Calculation of Phi Coefficients, July 2, 1953
 - A-9 Charles Wrigley and Louis L. McQuitty, The Square Root Method of Factor Analysis: A Re-Examination and a shortened Procedure, August 18, 1953
 - A-10 Charles Wrigley and Jack O. Neuhaus, A Measure of the Simplicity of Any Given Factor Pattern, August 17, 1953
 - A-11 Harry M. Mason, Controlling Redundancy in a Test Item Pool, October 16, 1953
 - A-28 Charles Wrigley and Malcolm Helper, The Calculation of Factor Measurements for Dichotomous and Multiple-Response Items, November 1, 1955
 - A-29 Louis M. McQuitty, Multiple Classification by Agreement Analysis in the Isolation of Types of Job-Knowledge Hem-Responses, November 4, 1955
 - A-30 Charles Wrigley, David R. Saunders and Jack O. Neuhaus, Application of the Quadrimax Method of Rotation to Thurstone's Primary Mental Abilities Test Battery, November 7, 1955
 - A-31 Louis L. McQuitty, Job-Knowledge Scoring Keys by Item versus Configural Analyses for Assessing Levels of Mechanical Experience, November 10, 1955
 - A-32 Charles Wrigley and Jack O. Neuhaus, The Matching of Two Sets of Factors, November 14, 1955
 - A-33 Louis L. McQuitty, Isolating Predictor Patterns Associated with Major Criterion Patterns, November 17, 1955
 - A-34 Charles Wrigley and Raymond J. Twery, The Prediction of Supervisory Ratings for Aircraft and Engine Mechanics, November 21, 1955
- Final Report for A - Methodology of the Development and Evaluation of Job-Knowledge Tests, November 30, 1955

- B-1 Paul Bakan, Vigilance Decrement: A Critical Review of the Literature and an Experimental Program, May 24, 1952
- B-2 Paul Bakan, Preliminary Tests of Vigilance for Verbal Materials, March 31, 1952
- B-3 William E. Kappauf and M. Carr Payne, A Selected, Annotated Bibliography on Procedures used in Activity Analysis, May 14, 1952
- B-4 William E. Kappauf and Alan Strand, A Brightness Discrimination Apparatus for the Study of Vigilance, July 16, 1952
- B-5 Paul Bakan, The Change in Threshold as a Measure of Decrement in a Vigilance Task, October 3, 1952
- B-6 Matthew Wayner, A Quality Control Analysis of Brightness Matching Data, October 27, 1952
- B-7 Dwight E. Erlick, A Study of the Intraserial Dependence of Brightness Matching Responses, October 27, 1952
- B-8 William E. Kappauf, Jack Nygaard and Alan Strand, An Evaluation of Plotting Performance on "Reversed" Range and Bearing Grids, January 20, 1953
- B-9 Paul Bakan and William E. Kappauf, Systematic Errors in Dial Reading as a Function of Dial Design and of Training, February 7, 1953
- B-10 William E. Kappauf and M. Carr Payne, Constant errors in Interpolation Between Scale Marks, I, February 11, 1953
- B-11 William E. Powe, A Note on the Origin of Some Systematic Errors in Reading Dials, February 18, 1953
- B-12 M. Carr Payne, Constant Errors in Interpolation Between Scale Marks, II, February 27, 1953
- B-13 Paul Bakan, William E. Kappauf and M. Carr Payne, A Review of Psychological Literature Bearing on the Effective Use of Long-Persistent Radar Scopes in ADC Operations, February 25, 1953
- B-14 W. F. Crowder, A Note on the Effect of Instructions on Scale Reading Errors, February 28, 1953
- Final Report for Task B, Proficiency Tests and Training Methods for Technical Personnel Engaged in the Operation of Aircraft Control and Warning Radar Systems, February 28, 1953
- C-1 Raymond H. Burros, An Index of Skewness and a Test of its Significance, July 15, 1952
- C-2 L. M. Stolurow, Trouble-Shooting in Line Maintenance: A First Report of Field Observations, August 20, 1952
- C-3 Lawrence M Stolurow and Charles M. Solley, bibliography on Problem Solving, Reasoning, Thinking and Concept Formation, September 2, 1952
- C-4 George R. Klare, Air Force Technical Training as a Problem in Communication: An Introductory Survey, October 1, 1952
- C-5 George R. Klare, Levarl M. Gustafson and James E. Mabry, The Reading Interests of AirmenIndoctrination Trainees, October 15, 1952
- C-6 Raymond H. Burros, Malcolm L. Gardner and Maxwell S. Pullen, Level of Abstraction of Static Visual Aid Accompanying a Technical Lecture, March 27, 1953
- C-7 George R. Klare, James E. Mabry and Levarl M. Gustafson, The Relationship of Verbal Communication Variables to Immediate and Delayed Retention and to Acceptability

- of Technical Training Materials, June 1, 1953
- C-8 Lawrence M. Stolurow, Charles Hopkins and William Sawrey, Mechanical Disassembly - Assembly as a Function of Demonstration and Part - Name Learning, August 25, 1953
- C-9 Lawrence M. Stolurow and Thomas F. Hodgson, A Digest of Interviews with Reciprocating Engine Mechanics about Trouble Shooting, October 5, 1953
- C-10 G. R. Klare, J. E. Mabry and L. M. Gustafson, A Study of Response Set in Relation to Directions to Subjects, October 16, 1953
- C-11 L. M. Stolurow, Charles Hopkins and William Sawrey, Mechanical Disassembly in Assembly as a Function of Listening to a Description and Watching a Demonstration, November 25, 1953
- C-12 G. R. Klare, E. H. Shuford, and W. H. Nicholas, The Relationship of Style Difficulty of Technical Material to Various Measures of Eye Movement, February 24, 1954
- C-13 G. R. Klare, L. M. Gustafson, J. E. Mabry and E. H. Shuford, The Relationship of Immediate Retention of Technical Training Material to Career Preferences and Aptitudes, February 1, 1954
- C-14 R. H. Burras, The Estimation of the Discriminal Dispersion in the Method of Successive Intervals, May 31, 1954
- C-15 R. H. Burras and M. L. Gardner, Multidimensional Restriction: A New Approach to Unidimensional Scaling of Stimuli, August 6, 1954
- C-16 G. R. Klare, E. H. Shuford, and W. H. Nicholas, The Relationship of Typographic Arrangement, Prosodic Patterning and Format Organization to the Learning of Technical Training Materials, August 9, 1954
- C-17 G. R. Klare, W. H. Nicholas, E. H. Shuford and R. Capobianco, The Relationship of Style Difficulty, Practice, Ability and "Set" to Efficiency of Reading and Retention, August 25, 1954
- C-18 G. R. Klare, E. H. Shuford and W. H. Nicholas, The Relationship of Pattern, Style, Difficulty and "Set" to Reading Efficiency, Retention and Acceptability of Technical Training Material, August 25, 1954
- C-19 L. M. Stolurow, B. Bergum, T. Hodgson and J. Silva, The Efficient Course of Action in Trouble Shooting as a Joint Function of Probability and Time, August 30, 1954
- C-20 J. J. Wulff and L. M. Stolurow, The Role of Class - Descriptive Cues in Paired-Associate Learning, August 31, 1954
- C-21 M. H. Detambel and L. M. Stolurow, Stimulus Sequence and Concept Learning, September 15, 1954
- C-22 R. H. Burros, L. M. Stolurow and M. L. Gardner, The Relationship of Mechanical Assembly Time to the "Relevant Complexity" of the Photograph Studied, September 16, 1954
- C-23 L. M. Stolurow and J. J. Wulff, The Relative Effectiveness of Two Sets of Substitutable Stimuli for Teaching Object Codes, September 17, 1954
- C-24 L. M. Stolurow, R. Malone, T. Tiffany, W. Nichols and E. H. Shuford, Performance of Groups of Trainees on an Objective Test of Trouble Shooting for the R-4360 Engine, April 14, 1955

- C-25 L. M. Stolurow, T. F. Hodgson and J. Silva, Some Interaction Effects on Technical Training and Work Experience on the Recall of Diagnostic Information by Airplane Engine Mechanics, May 16, 1955
- C-26 M. H. Detambel and L. M. Stolurow, Probability and Work as Determinants of Multi-Choice Behavior, May 23, 1955
- C-27 L. M. Stolurow, C. M. Solley and W. Fisher, Problem Solving in Relation to Prior Probability Learning, August 31, 1955
- C-28 L. M. Stolurow, B. O. Bergum, and J. T. Greene, The Use of Class Descriptive Cues to Facilitate Mediational Learning and Performance in Making Diagnostic Decisions, November 4, 1955
- C-29 L. M. Stolurow, and J. T. Greene, Performance on a Second Task in Relation to Inter-Task Changes in Unique and Class-Descriptive Features of the Stimuli, November 21, 1955
- C-30 L. M. Stolurow, M. H. Detambel and J. R. Newman, Transfer Effects of Association Reversal Under Different Conditions of Stimulus and Response Sharing, November 25, 1955
- C-31 L. M. Stolurow and B. O. Bergum, The Transfer Effects of Previous Experience Manifested Under Conditions of Association Reversal, November 28, 1955
- C-32 L. M. Stolurow and B. O. Bergum, The Use of Diacritical Signs to Provide Response-Cue Classes, November 22, 1955
- Final Report for Task C, Effectiveness Factors in the Design and Utilization of Training Devices and Instructional Materials for Technical Training, May 25, 1951 - November 30, 1955
- D-1 F. A. Muckler and W. G. Matheny, Transfer of Training in Tracking as a Function of Control Friction, July 1, 1952
- D-2 Y. Takada, Critical Review of Psychological Researches Related to the Mathematical Theory of Communication and a Preliminary Investigation of the Applicability of the Theory to Psychological Data, August 1, 1952
- D-3 F. A. Muckler, Transfer of Training in Tracking as a Function of Control Friction and Direction of Control Movement, August 15, 1952
- D-4 L. I. O'Kelly and W. G. Matheny, A Survey of the Effects of Stress on the Performance of Pilots, April 1, 1953
- D-5 M. L. Ritchie, The Skaggs-Robinson Hypothesis as an Artifact of Response Definition, May 25, 1953
- D-6 W. G. Matheny, A. C. Williams, Jr., D. Daugherty and S. G. Hasler, The Effect on Varying Control Forces in the P-1 Trainer Upon Transfer of Training to the T-6 Aircraft, April 2, 1953
- D-7 M. Adelson, A Method for Studying Human Tracking Behavior, April 5, 1953
- D-8 Report Missing including correspondence file
- D-9 J. D. Lyons and G. R. Grice, The Effect of Pressure Upon the Accuracy of a Simple Positioning Movement, October 1, 1953
- D-10 M. L. Ritchie, Transfer of Training as a Function of Task Complexity, March 12, 1954
- D-11 M. L. Ritchie and A. L. Michael, Transfer Between Instrument and Contact Flight Training,

September 30, 1953

- D-12 A. K. Solarz, W. G. Matheny, D. J. Daugherty and S. G. Hasler, The Effect of Attitude Toward Link Training upon Performance in the Aircraft, September 30, 1953
- D-13 A. C. Williams, Jr., and M. Adelson, A Variable Characteristic Simulator, November 15, 1953
- D-14 F. A. Muckler, M. Adelson and A. C. Williams, Jr., Verbal Learning and Message Variable Related to Amount of Information, January 1, 1954
- D-15 D. J. Daugherty, S. G. Hasler and W. G. Matheny, Comparisons of Flight Tasks Performed in the T-6 Aircraft and P-1 Trainer, September 30, 1953
- D-16 Report missing including correspondence
Final Report for Task D-Pilot Training, June 1, 1954
- E-1 L. J. Cronbach and W. Hartmann, A Pilot Study on the Prediction of Compatibility Using Air Force Officer Candidates, September 15, 1953
- E-2 I. Lazar, Interpersonal Perception - A Selected Review of the Literature, November 1, 1953
- E-3 D. McBride, Crew Position in Bomber Crews As a Determinant of Sociometric Choice, July 28, 1954
- E-4 W. A. Cleven, D. McBride and F. E. Fiedler, Similarity Between Persons as a Factor in Work Relations of B-29 Crew Members, August 19, 1954
- Final Report for Task E (missing) folder includes correspondence

Box 2:

- Report for Task F Prior to 12/22/51, The Effectiveness of Indoctrination During Basic Training
- H-6 W. E. Kappauf, M. C. Payne, W. E. Powe, J. D. Davis, Performance Decrement in Relation to Task Difficulty, October 16, 1955
- H-7 W. E. Kappauf and M. C. Payne, Jr., Intraserial Correlations in Brightness Matching Response: II, October 20, 1955
- H-8 W. E. Kappauf and M. C. Payne, Performance Decrement at a Search Task, October 28, 1955
- H-9 W. F. Crowder, An Automatic Brightness Discrimination Apparatus and the results of its Use in Some Preliminary Studies of Vigilance, November 25, 1955
- H-10 W. E. Kappauf, W. F. Crowder, J. D. Davis, and C. G. McDiarmid, Performance During Prolonged Watch-Keeping at a Visual Detection Task Involving Search, November 26, 1955
- H-11 W. E. Kappauf, C. G. McDiarmid, W. F. Crowder and J. D. Davis, The Effect of Search and Stimulus Interruption on Visual Detection During Prolonged Watch-Keeping, November 28, 1955
- H-12 C. G. McDiarmid, Individual Differences in Day-by-Day Vigilance When Stimuli are Infrequent, November 28, 1955
- Final Report for Task H - Vigilance and Variability of Judgment During Protracted Observation, November 30, 1955
- Training Research on USAF Air Crew and Technical Specialists Progress Report No. 1, May 25 -

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- Technical Progress Report #2, August 25 - November 25, 1951
- #3, November 25, 1951 - February 25, 1952
 - #4, February 25 - May 25, 1952
 - #5, May 25 - August 25, 1952
 - #6, August 25 - November 25, 1952
 - #7, November 25, 1952 - March 1, 1953
 - #8, March 1 - June 1, 1953
 - #9, June 1 - September 1, 1953
 - #10, September 1 - December 1, 1953
 - #11, December 1, 1953 - February 28, 1954
 - #12, March 1 - May 31, 1954
 - #13, June 1 - August 31, 1954
 - #14, September 1 - November 30, 1954
 - #15, December 1, 1954 - February 28, 1955
 - #16, March 1 - May 31, 1955
 - #17, June 1 - August 31, 1955