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# **Air Traffic Scenarios Test: Will Modifying the Instructions Change Performance?**

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16. Abstract <p>The Air Traffic Scenarios Test (ATST) is a low-fidelity radar simulation that is part of the Air Traffic Training and Test (AT-SAT) battery. Past Federal Aviation Administration (FAA) and military research has shown the ATST to be a strong predictor of training success for air traffic control specialists (ATCSs). Because the ATST was such a strong predictor of controller performance, the U.S. Air Force (USAF) was interested in using the ATST as part of its entrance testing selection process for air traffic. However, the current version of the ATST takes about an hour and a half to complete, and is too long for the USAF to use in its present form. In agreement with the FAA, the USAF requested that the FAA shorten (can be completed in less than an hour) the ATST without jeopardizing its reliability and validity. Two studies were conducted to examine whether it would be possible to shorten the ATST.</p> <p>In the preliminary study (Study 1), we analyzed data from 391 job applicants that took the AT-SAT during a two-month period. We examined scores for efficiency of aircraft movement to destination, safety or maintenance of aircraft separation, and procedural accuracy. Overall, performance changed across trials. Because performance did not consistently increase or decrease across trials, we cannot simply reduce the number of trials without changing the validity of the test. We thought it was possible that, with a more structured approach to designing instructions, performance on the trials may become more consistent, thus allowing us to reduce the number of trials to yield a reduction in total testing time.</p> <p>For Study 2, new interactive instructions were developed. Data were collected from Air Force recruits who were naïve about the ATST. A final sample size of 193 cases was used in the data analysis. Participants spent 6 minutes longer on the modified instructions than on the standard ones; however, both times were substantially less than the currently allotted time of 25 minutes. ATST performance for both groups was poor. Although a profile analysis of the two instruction types showed no significant difference, the multivariate tests for trial revealed a change across trials for the three measures. Additionally, when we compared the results of this study with our original sample of ATCS applicants, we found large differences in performance that might indicate that the USAF recruits were physically tired and had less motivation to perform well than did our applicants; accordingly, their performance was poorer. In sum, the results of these studies were inconclusive with regard to whether a shorter ATST would be viable as a controller selection instrument. Additional research will be necessary to determine if the modified instructions are beneficial and whether fewer scenarios will maintain similar or improved predictive validity for ATST.</p>					
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# AIR TRAFFIC SCENARIOS TEST: WILL MODIFYING THE INSTRUCTIONS CHANGE PERFORMANCE?

## INTRODUCTION

The Federal Aviation Administration (FAA) has gone through various transitions in its selection program for Air Traffic Control Specialists (ATCSs). In 2000, the Air Traffic Selection and Training Battery (AT-SAT) was developed to be used as part of the ATCS screening process (Ramos, Manning, & Heil, 2001a). The AT-SAT test battery contains eight subtests. One of the eight AT-SAT subtests is the Air Traffic Scenarios Test (ATST), a low-fidelity simulated radar control task designed to measure 11 air traffic controller abilities or worker requirements (Nickles, Bobko, Blair, Sands, & Tartak, 1995, see Table 1). Past research has shown the ATST to be a strong predictor of training success for air traffic controllers (Carretta & King, 2008; Broach & Brecht-Clark, 1993; Weltin, Broach, Goldbach, & O'Donnell, 1992).

The ATST is a dynamic low-fidelity simulation of the en route air traffic controller work environment. The objective of the test is to maintain separation of aircraft by following established rules. Abilities tested are: learning and following simple directions, visualizing and projecting paths in three dimensions, monitoring several objects at once, planning ahead, and remembering to execute simple commands at the appropriate time. Elements

Table 1  
Worker Requirements for Air Traffic Scenarios Test

ATST Worker Requirements
Prioritization
Tolerance for high intensity
Composure
Situation awareness
Planning
Execution
Thinking ahead
Reasoning
Decisiveness
Scanning
Perceptual speed and accuracy

of the test include a bordered area representing the airspace, control panel, aircraft (represented as arrows), data blocks that show current speed, altitude, and heading; four exits; and two airports (see Figure 1). The mouse is used to issue commands (change speed, altitude, or heading). Audio feedback, representing a pilot's voice, acknowledges the changes.



Figure 1. Diagram representing the Air Traffic Scenarios Test screen.

## STUDY 1: PRELIMINARY ANALYSIS

The test produced three subscores: an efficiency score, a safety score, and a procedural accuracy score. The efficiency score is based on the speed at which aircraft reach their destinations and how quickly aircraft are accepted as they enter the airspace. The safety score is based on the maintenance of separation of aircraft from each other and from the border of the airspace by an established distance. The procedural accuracy score is based on following the rules for accurately landing aircraft and exiting them from the airspace. Aircraft must land at the slowest speed (S) and lowest altitude (1) when heading toward an airport. Aircraft must exit the airspace at the fastest speed (F) and highest altitude (4).

Carretta and King (2008) suggested that the U.S. Air Force (USAF) could benefit from adding the ATST as part of its selection process for air traffic controllers (ATCs). When they used ATST as an adjunct to the Armed Services Vocational Aptitude Battery (ASVAB), the selection battery for the USAF and other military branches, the results showed that the ATST significantly improved prediction of USAF trainees' performance beyond the ASVAB (completely corrected  $\Delta R^2 = .156$ ).

The current version of ATST is too long to be utilized at Military Entrance Processing Stations (MEPS); therefore, the USAF requested a version of ATST that could be completed in less than one hour. Because of this, we examined the ATST to determine if the test could be shortened while maintaining its reliability and validity. A shorter version of ATST would require less time to administer and therefore could be useful to the FAA, as well.

We conducted two studies to determine if it would be possible to shorten the ATST while retaining its value as a controller selection instrument. In Study 1, a preliminary analysis, we wanted to know if there was evidence of performance leveling off across testing trials in the current version of the ATST to determine if any trials could be dropped to shorten the ATST testing time. This will help us determine if the duration of the ATST can be reduced without jeopardizing its reliability and validity (Scarborough & Bleckley, 2008). In Study 2, we thought that using interactive instructions might reduce testing time through improved and more stable performance in the earlier trials.

We set out to answer our research question: Is there evidence of performance leveling off across testing trials?

### Method

#### Data

Archived data collected in 2007 from 391 job applicants that took the ATST operationally during the two-month period, July and August, were analyzed.

#### Testing Platform

The ATST consists of three practice scenarios (2-1 minute scenarios, 1-3 minute scenario) and four test scenarios. The first three test scenarios, or trials, are 15 minutes long, increasing in number of aircraft with each trial (trial 1 = 18 aircraft, trial 2 = 20 aircraft, and trial 3 = 31 aircraft). The last test trial is 25 minutes long and contains the most aircraft (45). Including the 25 minutes allotted for instructions, the test currently takes approximately 95 minutes to complete (Appendix A).

#### Design and Data Analysis

We examined applicants' performance scores by trial for efficiency of aircraft movement to destination (efficiency), maintenance of aircraft separation (safety), and procedural accuracy. A multivariate repeated-measure ANOVA was conducted that used the ATST performance variables described above and trials as within-subject factors.

### Results

Results from the multivariate repeated measures ANOVA showed that the Wilk's Lambda was significant,  $F(6, 385) = 131.88$ ,  $p = .00$ , for the effect of trials. Univariate ANOVAs showed that the effect of trials varied across all three performance variables: efficiency,  $F(1, 390) = 72.67$ ,  $p = .00$ ; safety,  $F(1, 390) = 129.98$ ,  $p = .00$ ; and procedural accuracy,  $F(1, 390) = 560.07$ ,  $p = .00$ . Thirty-eight percent of the variance was accounted for by procedural accuracy, 13% of the variance was accounted for by safety, and, trailing behind was efficiency, which accounted for only 6% of the variance.

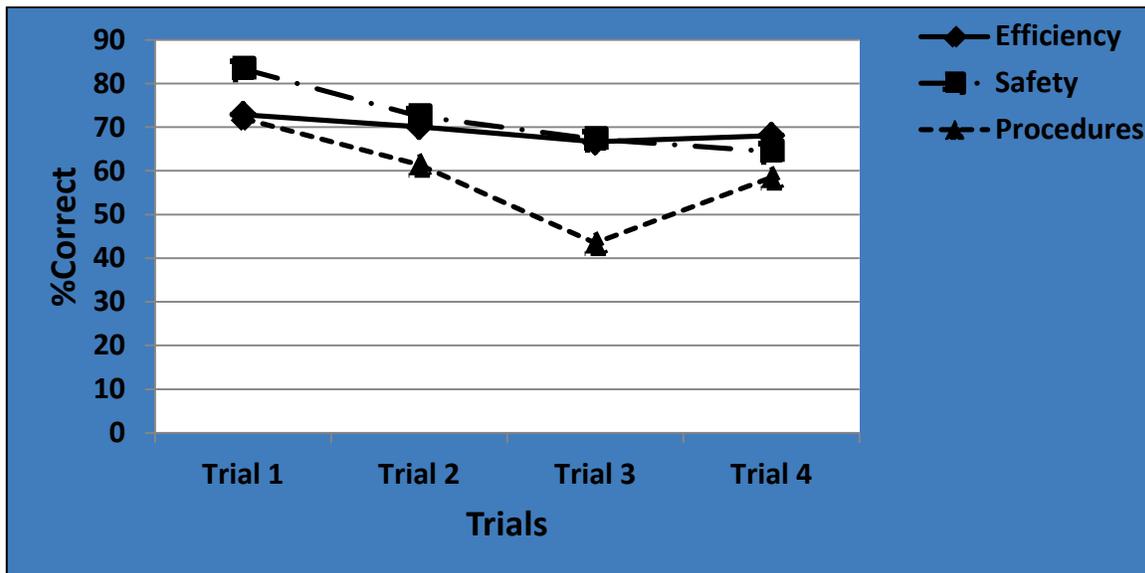


Figure 2. Performance percent correct across trials for Efficiency, Safety, and Procedures.

As seen in Figure 2, there is some evidence for flattening in the Safety measure, Efficiency is fairly level throughout the trials, and Procedural Accuracy declines steeply in Trial 3 but rebounds in Trial 4.

### Discussion

We examined the ATST performance data across trials to determine if any trials could be dropped or modified to shorten the ATST testing time. Results from this study suggested that participants continued learning how to perform the task during Trial 1 and did not reach performance stability by the end of Trial 4. In addition, the level of difficulty across trials did not change in an incremental fashion, making it difficult to make meaningful between-trials comparisons. For example, the third trial has about twice as many planes per minute as the first two trials.

The results suggest that, in its current form, the ATST cannot be shortened by simply dropping testing trials without jeopardizing its reliability and validity. Therefore, we developed new instructions that incorporate guided practice sessions instead of trial-and-error-learning, as is currently employed, with the intention of stabilizing performance. If more stable performance occurs earlier, then perhaps one or more of the trials could be dropped, thereby reducing the time required to take the test.

### STUDY 2: DEVELOPMENT AND EVALUATION OF MODIFIED TESTING INSTRUCTIONS

Research in other disciplines such as computerized assessment has shown that effective test instructions can reduce training time without degrading performance. Rohlman, Sizemore, Anger and Kovera (1996) found that instructions that covered one step per screen produced better understanding of the task, as measured by improved performance, when compared with traditional instruction formats.

Based on the Rohlman et al. (1996) findings that the most effective instructions are interactive and provide one action per page, we developed modified instructions for ATST.

Modified Instructions. We developed modified instructions for the ATST using a PowerPoint version of the ATST control screen to create an interactive learning experience for participants. The modified instructions consisted of PowerPoint slides adapted from various scenarios included in the ATST instructions. The slides were controlled by clicking interactive buttons that allowed the participant to proceed to the next section or return to the previous section.

Sections of the modified instructions included: 1) what the ATST measures, 2) specific information to be familiar with, 3) a description of the airspace and control panel, which includes heading, speed, level, pilot read back window, landing headings, the five-mile scale marker, total time, and elapsed time, 4) objectives, 5) rules with accompanying demonstrations for each of the three types of errors—hand-offs (efficiency), separation, and procedures, 6) brief information about the number of sessions for the practice tests and the actual test, 7) brief information on how to use the headset, and 8) a slide presented at the end of the instructions that included two interactive buttons that gave the option of either repeating the instructions or proceeding to the practice scenarios.

The individually-paced modified instructions described the task of each section, presented examples, and provided practice

time. Based on an individual's confidence with his/her competency on a task, a participant could either repeat a section or proceed to the next one. Samples of each type of instructions are shown in Appendices B and C.

The original ATST instructions were presented with multiple actions per page and did not provide an opportunity to practice the actions. For this study, the standard ATST instructions were converted to a PowerPoint format that replicated the paging and layout of the original instructions.

For both modified and standard instructions, we created a timer program that logged the amount of time spent reading the instructions and launched the ATST program at the end of the instructions.

In Study 2, we collaborated with the USAF to test the effectiveness of the modified instructions. To determine whether modified instructions would reduce testing time through improved performance, we compared the performance of two groups of participants receiving either modified or standard instructions. We examined how much time each group spent reading the instructions to determine whether the new instructions would be equivalent to the old instructions. In addition, we compared ATST performance scores for the two groups. We hypothesized that participants receiving modified instructions would perform better than those receiving standard instructions. We thought that the modified instructions, by providing some practice with the control panel and mouse, would improve scores, especially in the first trial.

We also hypothesized that the performance scores of those receiving modified instructions would have reduced variability, earlier in the test, as compared with the performance scores of those receiving standard instructions. Again, we felt that practice would produce better scores and therefore lower variability.

## Method

**Participants.** We entered into an agreement with the USAF to compare the efficacy of the ATST modified instructions with that of the standard instructions. Data were collected during the period June 25 through September 10, 2011, from 242 USAF recruits enrolled in basic training at Lackland AFB, San Antonio, TX. The average age of the recruits was about 22 years. The sample was 74% male and 26% female. Participants were a diverse sample: ethnically – 71% were non-Hispanic or non-Latino, 15% were Hispanic or Latino, and 14% declined to respond; racially – 76% were white, 15% were black/African American, 2% were Asian, 4% were Other, and 3% declined to respond. Most (96%) recruits in our sample had earned some college semester hours.

## Design and Data Analysis

The design of the study was a mixed-model, randomized design in which instruction type (modified versus standard) represented the between-groups variable, trials represented the within-subjects variable, and performance measures represented the repeated measures. Because we were measuring several different dependent variables (DVs) at several different times, we chose repeated measures multivariate analysis of variance analysis to prevent inflation of the probability of making a type I error, that is, finding significant results by chance (Tabachnick & Fidell, 2007).

## Procedure

The instructions and timer programs were beta tested before mailing the packaged suite of instructions, timer programs, ATST program, and installation guidelines to the USAF's contractors in San Antonio, TX. The testing package was installed on 20 computers at the Lackland Air Force Base Applied Performance Assessment and Testing (APAT) facility. Half of the computers were randomly selected to have the modified instruction package installed, while the other half had the standard instruction package installed. Air Force recruits, naïve about ATST, were briefed about the study by USAF contract proctors. Data were collected each week on Saturdays for 12 weeks, from June 26, 2011, to September 10, 2011.

Data were screened and means and standard errors were computed for three ATST criterion measures (efficiency, safety, and procedural accuracy). Following the data screening, we conducted a multivariate repeated measures analysis of variance. Additional analyses were conducted to compare whether there were differences in the performance of Air Force recruits versus FAA applicants (from Study 1). Because the modified instructions were not developed until Study 2, only data from recruits who received the standard instructions were compared with data from FAA applicants.

## Results

The original Air Force candidate sample consisted of 242 recruits. Changes were made to the testing protocol after the start of the study, and the first 20 cases were dropped. An additional 29 cases were dropped as outliers or containing missing data, resulting in a final sample size of 193. The demographics of the 193 cases were not different from the full sample.

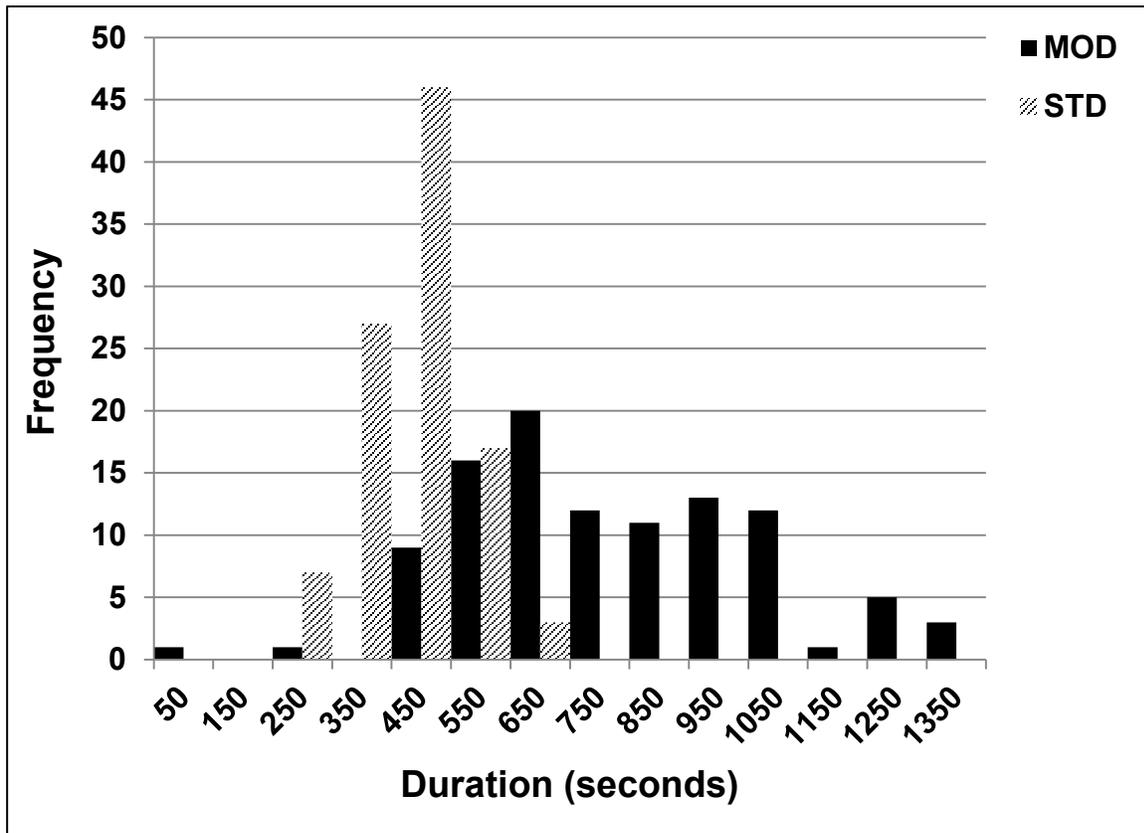


Figure 3. Length of time (duration in seconds) for USAF recruits to read the instructions.

#### Air Force Recruits

The modified instructions took significantly longer to read than the standard instructions,  $t = 13.16$ ,  $p = .000$ . Figure 3 presents the distribution of time spent reading the instructions. The mean length of time (measured in seconds) it took recruits to finish reading the modified instructions was 770.16 sec. (approx. 13 min) with a standard deviation of 247.12 sec.

(approx. 4 min) for 104 recruits. The mean time to finish reading the standard instructions was 427.75 sec. (approx. 7 min) and a standard deviation of 83.04 sec. (approx. 1.5 min) for 100 recruits. The slowest reading times were approx. 23 minutes for the modified instructions, versus approximately 11 min for the standard instructions.

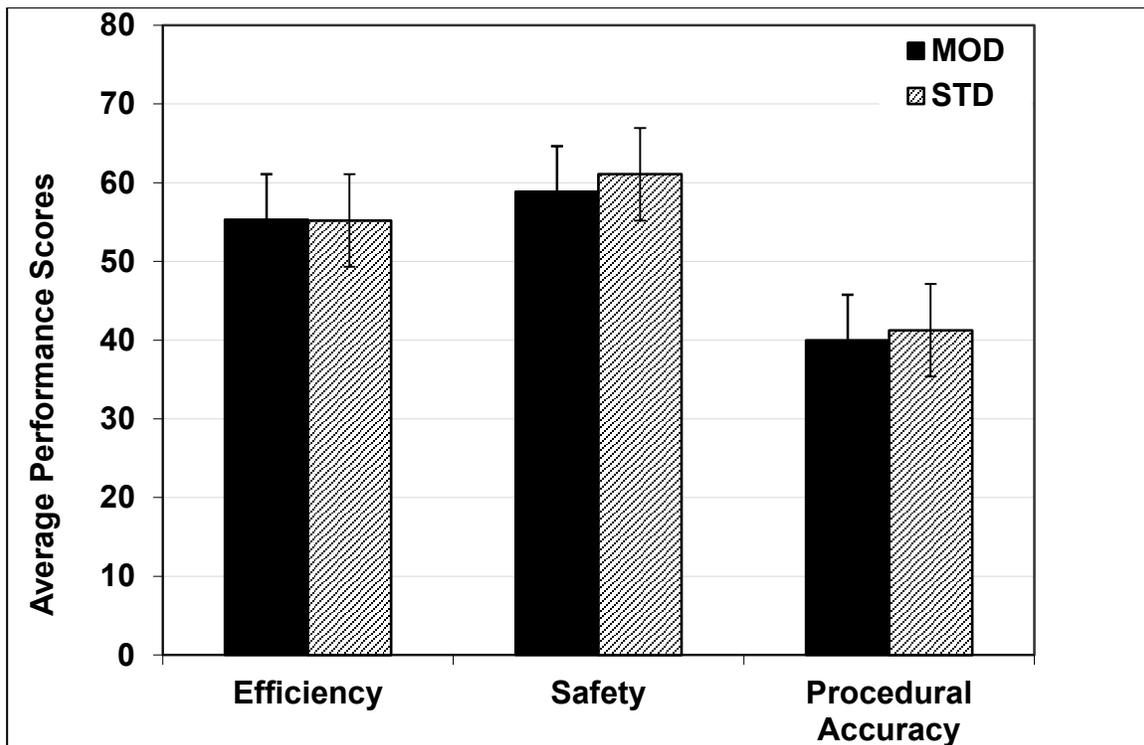


Figure 4. Average performance for each ATST measure by instruction type. Error bars represent the standard errors.

Our first hypothesis was that participants receiving modified instructions would perform better than those receiving standard instructions. As seen in Figure 4, there was no difference in overall performance between those receiving the standard and modified instructions (i.e., there was no main effect of instruction type; efficiency,  $F(1, 202) = 0.01, p = .940$ ; safety,  $F(1, 202) = 1.10, p = .296$ , and procedural accuracy,  $F(1, 202) = .144, p = .705$ ). For the efficiency measure, the means and standard errors for the modified instructions and standard instructions were, respectively,  $M_M = 55.30, SE = 1.71$  and  $M_S = 55.20, SE = 1.68$ . Means and standard errors for the safety measure, respectively, for both instruction types were  $M_M = 58.86, SE = 1.67$  versus  $M_S = 61.06, SE = 1.65$ . Procedural accuracy means and standard errors were  $M_M = 39.99, SE = 1.79$  for the Modified Instructions and  $M_S = 41.25, SE = 1.76$  for the Standard Instructions. Thus, this hypothesis was rejected.

Our second hypothesis was that the performance scores of those receiving modified instructions would have reduced variability, earlier in the test, as compared with the performance scores of those receiving standard instructions. Figure 4 shows that there was no trials by instruction type interaction, ( $F(9, 194) = .824, p = .60$ ); therefore, Hypothesis 2 was not supported

either. Moreover, results indicate that there were no significant effects between the two instruction types at the univariate level – efficiency,  $F(1, 191) = .002, p = .968$ ; partial eta squared = .000; safety,  $F(1, 191) = .877, p = .350$ , partial eta squared = .005; and procedural accuracy,  $F(1, 191) = .253, p = .616$ , partial eta squared = .001. Thus, there is no indication that performance was stable across trials for either instruction type.

#### Performance comparison of Air Force Recruits versus FAA applicants

Because the performance of the USAF recruits was lower than that of the applicants for FAA ATCS positions whose data were analyzed in Study 1, we felt that these results might not generalize to our population of interest, i.e., FAA and USAF air traffic control applicants. Therefore, we conducted an analysis comparing the performance of the USAF recruits with that of the FAA applicants. We interpreted these results with great caution, recognizing that the data were collected under different circumstances and for different purposes. We did this only to determine if the performance of the USAF recruits was sufficiently similar to that of FAA applicants to establish whether the data can be used to assess the effectiveness of the Modified Instructions.

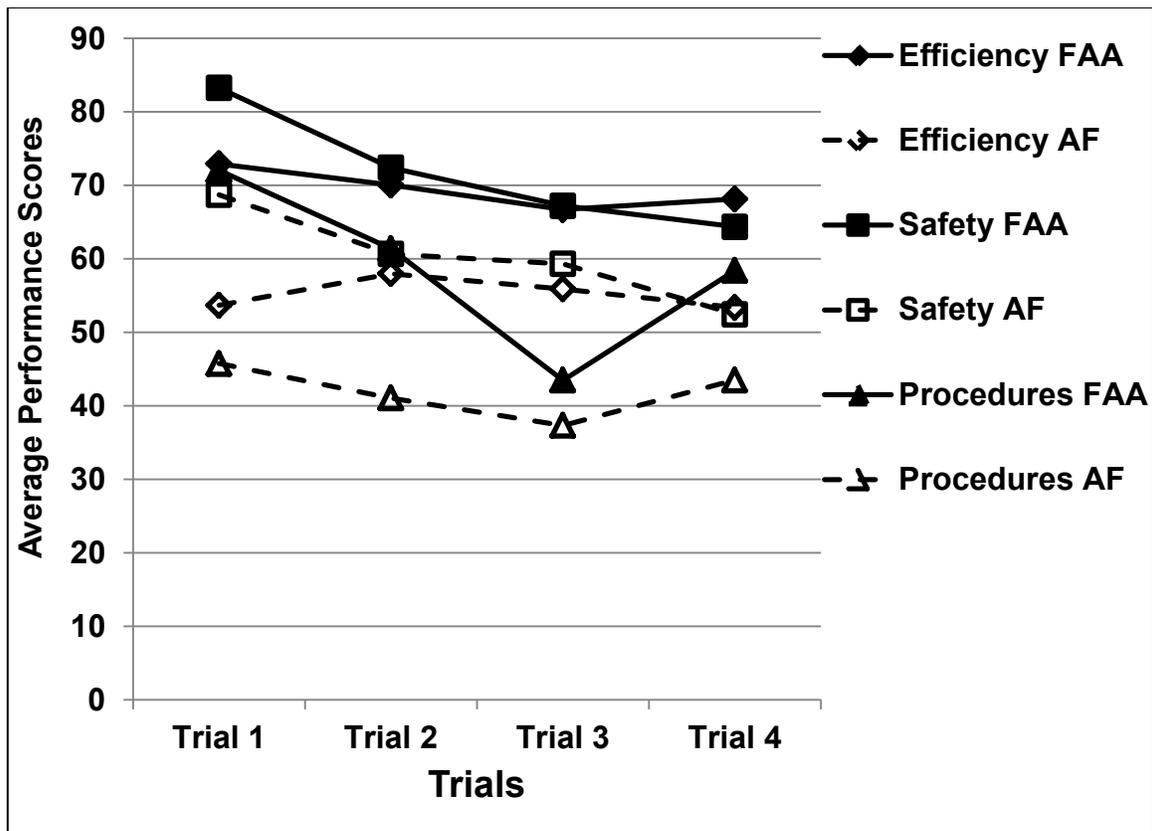


Figure 5. ATST estimated performance mean scores for measures of efficiency, safety, and procedural accuracy by trial and group — USAF recruits versus FAA applicants.

As indicated in Figure 5, the profile analysis resulted in a main effect of data source (FAA v USAF),  $F(1, 494) = 195.15$ ,  $p = .0001$ , partial eta squared = .247, suggesting that the performance of the USAF participants was different from that of FAA applicants. Additionally, the source by scores by trials interaction was significant,  $F(4.07, 2421.52)^1 = 6.09$ ,  $p = .0001$ , partial eta squared = .011. From this, we determined that the AF sample pattern of performance was different from the FAA sample. This is especially noticeable for the Procedures and Efficiency measures. We conclude that the USAF sample was not similar to the sample of FAA applicants.

### Discussion

The present study was conducted because the USAF requested a shorter version of the ATST that does not jeopardize the reliability and validity of the test. For the test to be operationally more useful for the Air Force, the test would need to take less time to complete. We first conducted a preliminary analysis of data collected from applicants for FAA ATCS positions to determine if any testing trials could be dropped to shorten the ATST testing time. We did this by examining the ATST performance data across trials. Results suggested that participants continued learning to perform the task during Trial 1 and did not reach performance stability by the end of Trial 4. Because it appeared that learning continued throughout the trials, it did not seem feasible to shorten the ATST by eliminating trials. Thus, we considered changing the way instructions for taking the test

were given in an attempt to reduce the time participants take to reach stable performance before beginning the testing phase. We thought that this could be accomplished through improved instructions. We constructed a set of modified instructions with the goal of attaining more stable performance earlier in the ATST testing session.

Subsequently, we proposed two hypotheses: 1) Participants receiving modified instructions would perform better than those receiving standard instructions; 2) Performance scores of those receiving modified instructions would have reduced variability, earlier in the test, as compared with the performance scores of those receiving standard instructions.

### Hypothesis 1

We expected that participants receiving modified instructions would perform better than those receiving standard instructions. We saw no differences in performance (either overall or for specific ATST measures) between groups receiving different types of instructions within or across trials. The improvement in performance that we had hoped for was not found, but because performance did not decline indicates that the approach used to develop the modified instructions has utility.

### Hypothesis 2

We had hypothesized that our modified instructions would result in more stable performance across trials. We did not observe a trials by instruction type interaction on either overall

performance scores or individual performance scores for those receiving modified instructions, as compared to those receiving standard instructions. In other words, the groups did not differ in performance across trials.

### Performance Comparison

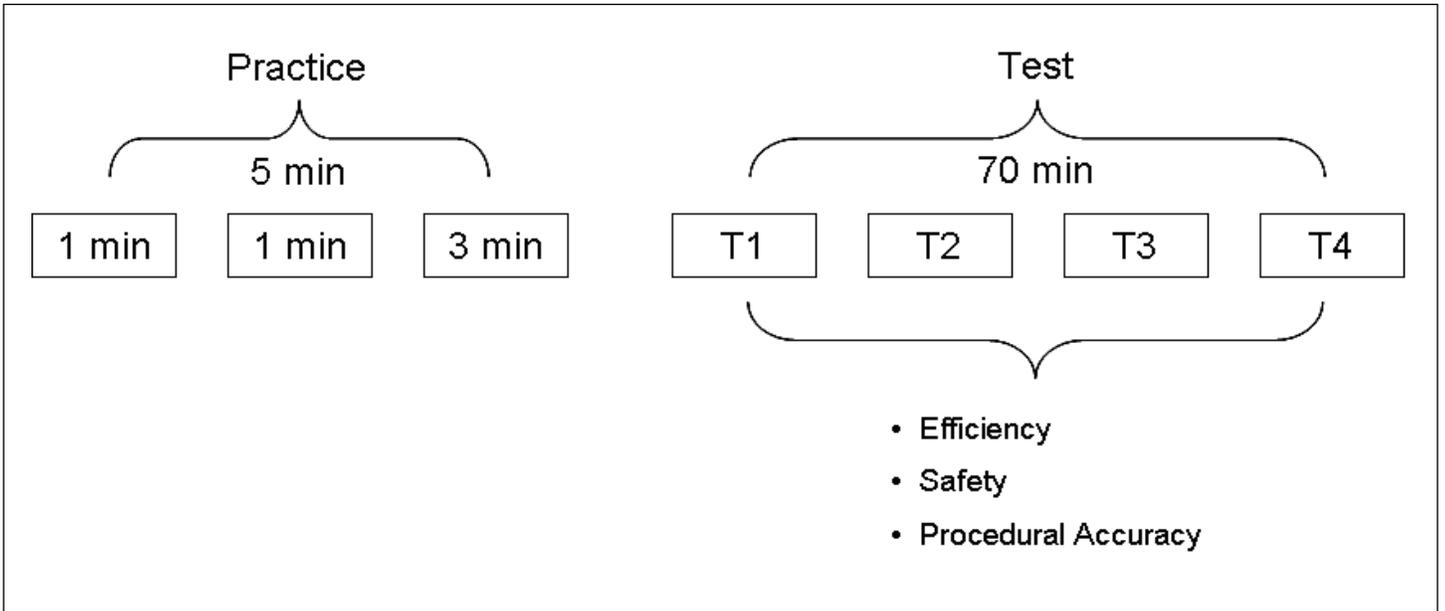
We visually observed that the performance of the participants in Study 2 appeared to be worse than that of FAA applicants on all measures across all trials. Therefore, we conducted an analysis comparing the performance of the USAF recruits with that of the FAA applicants. Interpreting these results with great caution, we found that the performance of the USAF participants was significantly lower than that of the FAA applicants. Furthermore, the three-way interaction suggests that there were differences in performance beyond purely poorer performance. We concluded that the USAF sample is not similar to the sample of FAA applicants. This lack of similarity suggests that task engagement (or lack thereof) may be a reasonable explanation for the lack of difference between the two instruction types. FAA applicants are likely to be more motivated than the Air Force recruits because they were taking the test for the benefit of getting a job; Air Force participants were volunteers who already had a job.

Subsequent efforts to reduce the time allowed for ATST administration would require testing of participants more similar to our applicants. Additional research with a more motivated sample of participants would seem warranted. Based on our results, we now have some information that can guide future research. We should develop different scenarios that are equal in length and equal in difficulty to determine the effect of the instructions, if any. These scenarios should be shorter to detect the point at which changes in performance due to learning are no longer apparent. From our analysis, we know that the Modified Instructions take more time than the Standard Instructions, but this may be an artifact of the animations and opportunities for practice in the modified instructions. Future research will be necessary to determine if a more interactive, practice-based approach to instructions is preferable to the ATST instructions used now.

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**APPENDIX A**  
ATST Practice and Test Duration (in minutes)





## CONTROLS

You give directions to the planes on your screen by first moving the mouse cursor (white arrow) over the plane you want to control and then pressing (clicking) the left mouse button.

You must click on the plane itself (the green arrow) and NOT on the plane's data block. Clicking on the data block will have no effect.

When a plane is ready to receive an instruction, the plane and its data block will turn yellow. Only one plane can receive an instruction at a time. Clicking on a second plane while another plane is highlighted in yellow will have no effect.

After you click on a plane and it turns yellow, you **MUST** select **ONE** of the instructions in the control section to the right of the screen.

Click on "Next" to continue,  
Or "Previous" to go back.

The screenshot displays a control interface with a black background and yellow text and highlights. On the left side, under "Landing Headings", there are two buttons: "e" with a green arrow pointing left and "f" with a green arrow pointing left, both highlighted with yellow boxes. Below these is a "5 Miles" distance indicator with a horizontal line and vertical end caps. Further down are two input fields: "Total Time" with the value "900" and "Elapsed Time" with the value "28". On the right side, under "Heading", there is a numeric keypad with digits 0-9, where the digit "6" is highlighted with a yellow box. Below the keypad are three buttons labeled "F", "M", and "S". Under "Level", there are four buttons labeled "4", "3", "2", and "1". At the bottom, a "Pilot Readback" section shows a white box with the text "Roger, Heading 6".



APPENDIX C  
An Example of the ATST Modified Instructions

A control panel is used to change the heading, speed, and level.



**Landing Headings**

e ←

f ←

**5 Miles**

Total Time  
900

Elapsed Time  
28

**Heading**

7 0 1  
6 2  
5 4 3

**Speed**

F  
M  
S

**Level**

4  
3  
2  
1

**Pilot Readback**

Roger, Heading 6

<< Previous

Next >>

The Heading menu shown by the white arrow is used to change aircraft directions.

There are eight headings 0-7:

- 0 and 4 control directions up (0) and down (4)
- 2 and 6 control directions right (2) and left (6)
- 1, 3, 5, and 7 are for diagonal headings
- The aircraft will fly in the direction you select until it exits, crashes, or you change the direction again.

The screenshot displays a flight simulator interface with a black background and yellow text. On the left, under 'Landing Headings', there are two buttons: 'e' with a left-pointing arrow and 'f' with a left-pointing arrow. A white arrow points from the 'f' button to the '6' heading button in the 'Heading' menu. The 'Heading' menu is a grid of buttons labeled 0 through 7. Below this, there are three buttons for 'Speed': 'F', 'M', and 'S'. Below that are four buttons for 'Level': '4', '3', '2', and '1'. On the left side, there are two digital displays: 'Total Time' showing '900' and 'Elapsed Time' showing '28'. At the bottom, a 'Pilot Readback' box displays 'Roger, Heading 6'. Navigation buttons '<< Previous' and 'Next >>' are located at the bottom left and right of the interface, respectively.

<< Previous

Next >>

Example:

This aircraft (green arrow) has a Heading 4. To change direction, use the mouse pointer to click on the aircraft. When the arrow turns yellow, select the Heading 2 for the aircraft.

M2f ↓ (Click on the arrow)

The image shows a vertical aircraft control panel with a black background and yellow text and borders. It is divided into several sections:

- Landing Headings:** Two buttons labeled 'e' and 'f', each with a green arrow pointing left.
- Heading:** A circular dial with numbers 0 through 7. The number 4 is highlighted in yellow.
- Speed:** Three buttons labeled 'F', 'M', and 'S'.
- Level:** Four buttons labeled '4', '3', '2', and '1'.
- Distance:** A section labeled '5 Miles' with a horizontal line below it.
- Time:** Two sections: 'Total Time' with a value of '900' and 'Elapsed Time' with a value of '28'.
- Pilot Readback:** A box at the bottom containing the text 'Roger, Heading 6'.

Navigation buttons are located at the bottom left ('<< Previous') and bottom right ('Next >>').

<< Previous

Next >>

Now practice changing the direction of the aircraft using the Heading menu of the control panel. When you are satisfied that you know how to change headings, click on the Next button to go to the Speed menu. To review the example, click on the Previous button.

↓ (Click on the arrow)

The control panel is divided into several sections:

- Landing Headings:** Two buttons labeled 'e' and 'f', each with a left-pointing arrow.
- Heading:** A circular dial with numbers 0 through 7. The number 6 is highlighted.
- Speed:** Three buttons labeled 'F', 'M', and 'S'.
- Level:** Four buttons labeled '4', '3', '2', and '1'.
- Total Time:** A digital display showing '900'.
- Elapsed Time:** A digital display showing '28'.
- Pilot Readback:** A text box displaying 'Roger, Heading 6'.

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