

## **Dissertation Computer Protocol**

Response Measurement (See Excel Sheet for sample data):

- Demographic Info
  - o Study ID
  - o M/F
  - o Age
  - o Years of Edu
- Practice Data
  - o Practice (Total Time to Completion)
  - o Practice Trials to Criterion
    - # Trials needed to get 10 correct in a row
- Session # (5 sessions total. 1 VR schedule per session)
  - o Set of 10 trials at a given VR value
    - VR = average number of responses needed per trial
- VR Schedule (5 VR schedules in total, please have computer randomly rotate which is presented first. Each schedule will be presented once)
- Initial Selection
  - o Did participant select Option 1 (Commitment Option) or Option 2 (No Commitment Option)
- Trial #
  - o There will be 10 trials per session.
  - o Each trial will have a fixed number of responses based on the VR schedule.
    - Ex. VR100 = (Average # Responses = 100)
      - Trial 1 = 55
      - Trial 2 = 65
      - Trial 3 = 75
      - Trial 4 = 85
      - Trial 5 = 95
      - Trial 6 = 105
      - Trial 7 = 115
      - Trial 8 = 125
      - Trial 9 = 135
      - Trial 10 = 145
- # Responses Required in this Trial
  - o Run all of the values listed above (Trial 1 – Trial 10) in random order (or until participant cashes out)
- Response #
  - o Sequential numbered list of the responses made
- Response Accuracy
  - o Was response correct or incorrect?
    - Correct = 1
    - Incorrect = 0
- Pre-Ratio Pausing (in seconds)
  - o Only recorded for the 1<sup>st</sup> response of every trial
  - o Time from when participant presses “Start” to when participant makes first response
- Inter-Trial-Interval (seconds)
  - o Time between trials
    - Example: Time between response 2 and response 3
- Total Time elapsed
  - o Duration up until this point (Timer counting up)
- Rate of responding (per Trial)
  - o # responses/Total time elapsed
- % Correct (per Trial)
  - o  $(\# \text{ correct})/(\# \text{ correct} + \# \text{ incorrect}) * 100$
- Did participant switch to Option 2?
  - o This question will only be asked if participant initially selected Option 1
  - o Yes = Switched to Option 2
  - o No = Continued with Option 1
  - o N/A = If participant was currently in Option 2 (no opportunity to switch)

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- Did participant cash out?
  - o This question will only be asked if participant is already in Option 2
  - o Yes = Participant chose to end the session
  - o No = Participant continued to the next trial
  - o N/A = If participant was currently in Option 1 (no opportunity to cash out)
- Cash Earned
  - o Option 1 earned \$1/trial for a total of \$10 for committing and completing the session
  - o Option 2 earns \$0.50/trial.
  - o If participant switches from Option 1 to Option 2, cash out rate is \$0.50/trial completed

1. Experimenter Set-Up & Demographic Information	<ul style="list-style-type: none"><li>- Assign ID # (3-digit ID starting with 101)</li><li>- M/F</li><li>- Age</li><li>- Years of Education</li></ul>
2. Initial Instruction Page (Both Versions)	"During this program, you will be asked to make button presses on the keyboard. You will be required to press the keyboard key that is presented on the screen. Possible key presses include the up, down, left, and right arrow keys. Let's practice!"
3. Practice Page (Practice is meant to ensure that participants understand what they have to do during the task)	<ul style="list-style-type: none"><li>- Run program until 10 consecutive correct responses are acquired</li><li>- Screen should look like this:<div style="border: 1px solid black; padding: 10px; margin: 10px 0;"><div style="border: 1px solid black; padding: 5px; text-align: center;">Press the following key:</div><div style="border: 1px solid black; padding: 10px; text-align: center; margin-top: 20px;"><div style="border: 1px solid black; padding: 5px; display: inline-block;">↑</div></div></div></li><li>- It should be followed by praise for correct responses<div style="border: 1px solid black; padding: 10px; margin: 10px 0;"><div style="border: 1px solid black; padding: 10px; text-align: center;"><div>GREAT!</div><div style="text-align: center;">😊</div></div></div></li><li>- It should be followed by corrective feedback for incorrect responses<div style="border: 1px solid black; padding: 10px; margin: 10px 0;"><div style="border: 1px solid black; padding: 5px; text-align: center;">Try Again. Press the following key:</div><div style="border: 1px solid black; padding: 10px; text-align: center; margin-top: 20px;"><div style="border: 1px solid black; padding: 5px; display: inline-block;">↑</div></div></div></li></ul>
4. End Practice	"Congratulations! You have successfully completed the practice segment of this task. If you have any questions, please ask the experimenter at this time."

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5. Experiment Introduction	<p>“When the experiment begins, you will be asked to select one of two options.</p> <p>Option 1: Commitment Option – You can commit to complete 10 trials in this session. If you complete your commitment, you will earn \$10 upon completion of the session.</p> <p>Option 2: No Commitment Option - You will only be required to complete one trial in this session. Once you finish, you will earn \$0.50. You can either choose to cash out and obtain your \$0.50 or you can choose to complete another trial. You may continue to work on new trials up to 10 times.</p> <p>If you select Option 1, at the end of each trial, you will be offered the choice to switch to Option 2. If you switch, you may cash out at the “Option 2” rate of \$0.50 or continue to complete trials in Option 2.</p> <p>Do you have any questions?”</p>
6. Experiment Select Option	<div><div>Select an option:</div><div>Option 1: Commitment</div><div>Option 2: No Commitment</div></div>
7. Start Experiment	<ul style="list-style-type: none"><li>- Begin presenting trials according to randomly rotated schedule (pre-described)</li><li>- Trials should look exactly like practice, except no feedback is provided</li><li>- Rotate through targets (↑, ↓, ←, or →)</li></ul> <div><div>Press the following key:</div><div>↑</div></div>
8. Option 1 End of Trial 1-9	<ul style="list-style-type: none"><li>- “Congratulations. You have completed <math>n</math> trials. At the Option 1 rate, you have earned \$X.XX. If you would like to continue with the commitment option and begin your next trial, please press ‘Continue with Commitment Option.’ If you would like to switch over to Option 2, please press ‘Switch to No Commitment Option’”.</li><li>- If “Continue with Commitment Option is selected”, initiate next trial (See below Step 9)</li><li>- If “Switch to No Commitment Option” is selected, present “Option 2 End of Trial 1-9” (See below Step 10)</li></ul> <div><div>[See instructions above]</div><div>Continue with Commitment Option</div><div>Switch to No Commitment Option</div></div>

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9. "Continue with Commitment Option"	<ul style="list-style-type: none"><li>- Begin presenting trials according to next schedule</li><li>- Trials should look exactly like practice, except no feedback is provided</li><li>- Rotate through targets (<math>\uparrow</math>, <math>\downarrow</math>, <math>\leftarrow</math>, or <math>\rightarrow</math>)</li></ul> <div><div>Press the following key:</div><div><div><math>\uparrow</math></div></div></div> <ul style="list-style-type: none"><li>- At end of session, repeat Step 8.</li></ul>
10. (a)  "Switch to No Commitment Option" – Option 2 End of Trial 1-9	<ul style="list-style-type: none"><li>- "Congratulations. You have completed <math>n</math> trial(s). At the Option 2 rate, you have earned \$X.XX (<i>modified value</i>). If you would like to cash out, please press select the option, "Cash Out". If you would like to continue on to the next trial, please press "Continue".</li></ul> <div><div>[See instructions above]</div><div><div>Continue</div><div>Cash Out</div></div></div>
10. (b)  "Continuing No Commitment Option" – Option 2 End of Trial 1-9	<ul style="list-style-type: none"><li>- "Congratulations. You have completed <math>n</math> trial(s). You have earned \$X.XX. If you would like to cash out, please press select the option, "Cash Out". If you would like to continue on to the next trial, please press "Continue".</li></ul> <div><div>[See instructions above]</div><div><div>Continue</div><div>Cash Out</div></div></div>
11. (a) At end of Commitment	<ul style="list-style-type: none"><li>- "Congratulations! You have completed this session and earned \$X.XX. Please take a 5-minute break prior to starting the next session"</li><li>- Begin 5-minute break count-down</li><li>- <b>Restart at Step 5</b></li></ul>
11. (b) If "Cash Out" is selected	<ul style="list-style-type: none"><li>- "Congratulations! You have completed this session and earned \$X.XX. Please take a 5-minute break prior to starting the next session"</li><li>- Begin 5-minute break count-down</li><li>- <b>Restart at Step 5</b></li></ul>

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<p>12. If “Continue”(Option 2) is selected</p>	<ul style="list-style-type: none"><li>- Begin presenting trials according to VR schedule</li><li>- Trials should look exactly like practice, except no feedback is provided</li><li>- Rotate through targets (↑, ↓, ←, or →)</li></ul> <div><div>Press the following key:</div><div>↑</div></div> <ul style="list-style-type: none"><li>- At end of trial, return to step 10</li></ul>
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- Once 10 trials or “Cash Out” is selected, Begin 5-minute break count-down and ***Restart at Step 5*** with new VR schedule