The Center and Laboratory for Behavioral Operations and Economics  
The Naveen Jindal School of Management  
The University of Texas at Dallas  
SM31  
800 West Campbell Road  
Richardson, TX 75080-3021

Basic Guide for Lab Users

Who Can Use the LBOE?

The Center and Laboratory for Behavioral Operations and Economics (LBOE) at The University of Texas at Dallas has a computer lab devoted to research in behavioral social sciences. The lab is located in the Naveen Jindal School of Management Building, room [SOM 12.201](http://www.utdallas.edu/som). Use of the lab must conform to **ALL** LBOE criteria; these are:

- The sole purpose of the lab is conducting research.
- Research is conducted by a faculty member affiliated with the Jindal School of Management or with the LBOE faculty roster, or by a student working under the supervision of a Jindal and/or LBOE faculty member. Other UT Dallas faculty and students seeking access to the lab must request permission from the lab directors, Professor [Gary Bolton](mailto:gbolton@utdallas.edu) or Professor [Elena Katok](mailto:ekatok@utdallas.edu).
- The research has been granted a valid UT Dallas IRB for use of human subjects.
- Subjects are paid monetary incentives based on their earnings (not just a flat fee) for participation. The average pay for one hour study should be $15, including show up fee of $5. Please calibrate your study accordingly.
- There is no deception involved in the experiment.

Getting Started

UT Dallas policy requires that you complete [IRB training](http://www.utdallas.edu/research/compliance/irb/training.html) to be eligible to use LBOE facilities.
For access to the LBOE room and the online recruitment system, send an email to LBOE Co-Director Elena Katok ([ekatok@utdallas.edu](mailto:ekatok@utdallas.edu)) with your UT Dallas NetID, primary email address, and your primary departmental affiliation. She will send you a confirmation email with a link to log in, your new system username, and a temporary password (that you will need to change immediately upon receipt of that email).

You will then need to obtain the lab keys to the computer lab and passkey to the podium from the [lab manager](mailto:lab.manager@utdallas.edu) in person.

You should not, under any circumstances, share your username or password with anyone. If you forget your password, please contact the lab manager to get it reset.

**Things to do before running the first experiment**

- IRB certificate
- IRB approval
- Get Lab door keys – Contact [Joan Fritz](mailto:joan.fritz@utdallas.edu) or the [Labmanager](mailto:lab.manager@utdallas.edu)

**IRB training and IRB minimal review**

IRB minimal review is required for any research project involving experiments with human subjects. IRB training is the very first step to pass IRB minimal review.

To complete IRB training, go to [http://www.utdallas.edu/research/orc/irb/minimal_review/](http://www.utdallas.edu/research/orc/irb/minimal_review/)

**Click on Required Training**

**Submission Checklist For Minimal Review**

- IRB Application to Determine Eligibility for Minimal Review with all sections completed and signed by the Principal Investigator
- **Required Training** for Principal Investigator and Research Assistants
- Appendices explaining protocol (e.g., tables, charts, diagrams)
- Recruitment materials, if any, including:

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As a new user, Click on Registration

Provide the Basic Information and Click on Create account.

User Registration

If you already have an account, log in from the Login page.

Enter Your Information

Please complete the following enrollment form. Items marked by an (asterisk *) are required for processing your enrollment.

In order to receive credit for completing this course, you must set up a user account consisting of your email address and therefore choose a password that is easy to remember.

*Email: Email id

*Email, Again: Email id

*Password: ********

*Re-Enter Password: ********

Title: Ms. 

*First: First Name

M.I.: 

*Last: Last Name
Your account will be created and you can log in to proceed for IRB training.
Once you log in, you will be taken to the screen below:

There are 4 quizzes to pass to get the IRB certificate. Once you pass all the quizzes you will get the IRB certificate.

After you obtain the training certificate, go to the following website for a checklist of IRB minimal review and instructions on how to get it approved.
http://www.utdallas.edu/research/orc/irb/minimal_review/
Using the Online Recruitment System

Create your researcher account in SONA.

To create a researcher account, email the lab manager with your full name and your UTD email address.

Once you have a researcher account in SONA, you can create your experiments in https://utdallasjindal.sona-systems.com

Create a new Experiment (Experiment = Study)

After you log in, click Add new study > Standard study > Continue

Next, you will need to enter information about the session. Each field should be self-explanatory. Keep in mind that all information you enter here will be visible to subjects.

The Laboratory for Behavioral Operations and Economics (LBOE) is located on the second floor of new JSOM building (JSOM 12.201).

For Payment information, it is recommended that you write "Performance Dependent" to avoid unnecessary information leakage.
You may also use Advanced Settings where more options are available. Advanced Settings are optional but recommended. They are on the same page with Basic Information.
# Advanced Settings

## Pre-Requirements

- Participants must participate in ALL of these studies before they may sign up.
- Participants must participate in AT LEAST ONE of these studies before they may sign up.

<table>
<thead>
<tr>
<th>Search...</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF Two-Period Auction</td>
</tr>
<tr>
<td>BG Experiment</td>
</tr>
<tr>
<td>COLDAL</td>
</tr>
<tr>
<td>Coordination in Supply Chains</td>
</tr>
<tr>
<td>Coordination in Supply Chains S1</td>
</tr>
<tr>
<td>EH Bargaining</td>
</tr>
<tr>
<td>EH Auction experiments</td>
</tr>
<tr>
<td>EH Auction experiments2</td>
</tr>
<tr>
<td>EH SL Games</td>
</tr>
<tr>
<td>Experiment Test (directive)</td>
</tr>
</tbody>
</table>

## Disqualifiers

Participants must **not** have participated in ANY of these studies before they sign up.

<table>
<thead>
<tr>
<th>Search...</th>
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<tbody>
<tr>
<td>BF Two-Period Auction</td>
</tr>
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</tr>
<tr>
<td>EH SL Games</td>
</tr>
<tr>
<td>Experiment Test (directive)</td>
</tr>
</tbody>
</table>

## Course Restrictions

Participants must be in one of these courses:

<table>
<thead>
<tr>
<th>Search...</th>
</tr>
</thead>
<tbody>
<tr>
<td>L808 experiment</td>
</tr>
</tbody>
</table>

## Invitation Code

(leave blank if participants do not need a special password to sign up for this study)
<table>
<thead>
<tr>
<th>Question</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this a web-based study?</td>
<td>No</td>
</tr>
<tr>
<td>Study URL (optional)</td>
<td></td>
</tr>
<tr>
<td>Participant Sign-Up Deadline</td>
<td>5 hours before study is to occur</td>
</tr>
<tr>
<td>Participant Cancellation Deadline</td>
<td>24 hours before study is to occur</td>
</tr>
<tr>
<td>Should the Researcher receive an email notification when a participant signs up or cancels?</td>
<td>No</td>
</tr>
<tr>
<td>Researchers at Timeslot-Level</td>
<td>Yes</td>
</tr>
<tr>
<td>Automatic Credit Granting</td>
<td>No</td>
</tr>
<tr>
<td>Shared Comments (Up to 1,000 characters, optional)</td>
<td></td>
</tr>
<tr>
<td>Private Comments (Up to 3,000 characters, optional)</td>
<td></td>
</tr>
<tr>
<td>Research Alternative</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>
Prescreen Restrictions for the study

You can restrict the participants for your study based on the following questions.

Click on “Set Prescreen Restrictions”.

Following are the questions answered by participants, when they create their log in.

Disclaimer: This data is self-reported by participants. It is not validated against UTD database, hence we cannot guarantee 100% accuracy. If these prescreen restrictions are crucial to your study, it is your responsibility to confirming with the participants prior to the study.

- **Gender**
  Multiple-choice question, only one choice can be selected. Participants may decline to answer this question.

- **What is your current degree in pursuit?**
  Multiple-choice question, only one choice can be selected. Participants may decline to answer this question.

- **Which best describes your major field of study?**
  Multiple-choice question, only one choice can be selected. Participants may decline to answer this question.

- **From which year did you begin your study at UT Dallas?**
  Multiple-choice question, only one choice can be selected. Participants may decline to answer this question.

Select the question based on which you want to set the restrictions.

For eg – you need only undergraduate students, who joined UTD after 2012. Select as below

Select the question based on which you want to set the restrictions.

For eg – you need only undergraduate students, who joined UTD after 2012. Select as below.

Listed below are questions for the prescreen. Please provide a response for every question.

- **Gender**
  Gender

- **What is your current degree in pursuit?**
  What is your current degree in pursuit?

- **Which best describes your major field of study?**
  Which best describes your major field of study?

- **From which year did you begin your study at UT Dallas?**
  From which year did you begin your study at UT Dallas?
Listed below are questions for the prescreen. Please provide a response for every question.

(What is your current degree in pursuit?)
Choices:
☑ Undergraduate
☐ Master
☐ MBA
☐ Ph.D.

Listed below are questions for the prescreen. Please provide a response for every question.

(From which year) From which year did you begin your study at UT Dallas?
Choices:
☐ 2009
☐ 2010
☐ 2011
☑ 2012
☐ 2013
☑ 2014

Click on SAVE changes and you are done!

**Add a session/timeslot to your experiment**
Select your study under which you want to add a session/timeslot and on Study Information select View/Administer Time Slots >Add a timeslot
Select the location as “LBOE Lab - JSOM II (12.201)”.  

<table>
<thead>
<tr>
<th>Duration</th>
<th>90 minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay</td>
<td>Performance Dependent</td>
</tr>
</tbody>
</table>

Use this page to add a single timeslot for your study. You may also add multiple timeslots at once.

**Date:**
Wednesday, September 24, 2014

**Start Time:**
3:15 PM

**End Time:**
75 minutes after start time

**Number of Participants:**
24

**Location**
LBOE Lab - JSOM II (12.201)

Select a location from the list, or type in your own, but do not do both.

**Researcher**
ALL

Click on View Schedule to see the lab schedule.
Here is the pop-up window for the time schedule.

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The duration of your experiment can only be changed at Study level. All sessions within a study will have the same duration.

**Reserve lab before and after experiment**

You need to reserve the lab before your experiment in order to set up the lab. Moreover, you need to reserve the lab after your experiment in order to pay the subjects and clean up the lab.

Lab reservation can be done in a separate inactive study with following procedures:

**Click “All Study” -> Inactive Study -> Lab reservation -> Study Menu-> View/ Administer Time Slots-> Add Time Slots**

(This timeslot is for one hour)
Send out letters/invitation

Click Prescreen results | Prescreen Qualification Analysis | Select Gender and click View Question Response Data | Select both Female and Male and click Analyze, then you will be on the page of Participant Contact to send out invitation letters.
Type your email content in the “Message” section. You can provide the route map to the lab in your email as hyperlink. You cannot have attachments in the invitation email.

A sample invitation letter is as follows:

**********************************Sample Invitation Letter******************************

Hi all:

We would like to invite you to participate in a computerized experiment conducted by researchers at Naveen Jindal School of Management, the University of Texas at Dallas.

The experiment will take place in the new LBOE lab ([SOM Room 12.201]).

You will be paid in cash for your participation. The sessions are scheduled for the

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following time:

Wednesday, May 21, 2014 11:00 AM - 12:00 PM (noon)

If you want to participate, you can register by clicking the following link and log in with your account:

https://utdallasjindal.sona-systems.com

Please keep in mind that spots are limited and may be reserved very quickly. If you cannot see any spots available, that means all the spots have been reserved.

(If you cannot click the link, copy it to the clipboard by selecting it, right-click and choosing "Copy", and then paste it into the address line in your browser by right clicking there and choosing "Paste".)

If you register and do not attend the session, you will be marked absent in the system. Three no-shows will prevent you from participating in future studies.

Please note the lab is shifted to JSOM II

How to reach the new lab?
From the 2nd floor of JSOM I: use the walkway to JSOM II and proceed straight. You will see the new LBOE Lab 12.201 on your right.
From the old lab: Take the elevator next to the old lab to second floor. Use the walkway to JSOM II. Walk straight and you will see the new LBOE Lab 12.201 on your right. Please click here to view the route map.

Researcher XXX

*****************************************************************************

Send out confirmation letters/Reminder letters

You can send reminder letters to the subjects one day prior to the study.

To send out confirmation letters or reminder letters, select My Studies > Timeslots > Modify > Contact All Participants.

Update Show-up status

Once the session is complete, you can update the attendance status.

All researchers are required to record the attendance in the SONA system.
Studies → select your study → Study Menu → View/Administer Timeslots → select the timeslot → Modify.

If a subject participated in the experiment, please select “Participated”.

If a subject showed up - but did not participate, please select “Excused”. You can “Excuse” subjects who offered a legitimate reason for their absence prior to the experiment’s start time.

You can mark “Unexcused” for subjects who do not show up without a valid reason.

It is crucial that you do this as soon as you are done running the session to prevent subjects from signing in for other sessions of the same study.

If there are any subjects participating in your study, who have not registered, please collect their Net ID, first name, last name and email address.

Go to the timeslot, and at the bottom of the page will be a manual sign-up option (and Batch Credit Grant option). It will only appear if the timeslot has open spaces, so be sure of that first.

Add them to the timeslot- so that they do not register for the same study later.

If they do not have an account in SONA, please email the Lab Manager with the following details.

Time slot information
First name, last name, NetID and email address.

It is required to have the names of the participants of the study in SONA system matching with your check out forms/receipts.
Using the Lab

Contact Joan Fritz or the lab manager for the lab keys.

Because all of the lab’s 34 computers are connected to the Internet, you can use it to run Web-based experiments. If you need to install additional software, please let us know (ekatok@utdallas.edu) so that we can accommodate your request.

As the experimenter leading a session, please arrive AT LEAST ONE HOUR IN ADVANCE of the scheduled start time of your experiment in order to set up the lab. We penalize subjects for arriving late, but we can only enforce this if the experimenter starts in a timely manner. You should avoid starting later than 5 minutes after the scheduled time to begin. As a general rule, subjects arriving within 3 minutes of the scheduled start time are guaranteed their show-up fees.

Before running a session, make sure you have the items in the following checklist:

**Experiment Checklist**

- Arrive at least one hour in advance of your session to set up the lab.
- Bring the following materials:
  - Attendance checkout form for the financial office (download the list from the online system).
  - Copies of the individual checkout forms.
  - Copies of the consent form for subjects.
  - Copies of the instructions.
  - Pens for the subjects. (Pens are kept in the cabinet in the lab.)
  - Cash to pay subjects.

Also, the system updates the show-up rates nightly, banning people who have several accumulated absences, so please make sure you update the show-up status as soon as possible.

In the next section, you will learn the basics of using the lab to run experiments using z-Tree.
Using z-Tree to Run Lab Experiments

This section of the manual assumes you have basic knowledge of how z-Tree works. If you are unfamiliar with it, please read the manuals and wikis found on z-Tree's website (http://www.iew.uzh.ch/zTree/index.php).

All computers at LBOE can run z-Tree files, using up to 10 channels. Channels 1-5 are configured to use the default font size used by z-Tree, while channels 6-10 are configured to run with a font size of 22.

As an experimenter, you can turn on the podium computer with the podium passkey, then log in using your UT Dallas NetID and password.

After you have logged in, open your z-Tree files using the channel batch file shortcuts (“zTree01,”“zTree02,”tc.).

Note that you may only require 1 channel to run small sessions. For bigger groups, we recommend you use more channels (2-5) and split the group into subgroups for each channel. Next, open NetSupport. There is a shortcut in the desktop that looks like this:

Click “Classroom” in the following window:
When asked whether you want to make changes in this computer, click “No.” Then, click on “zleaf 1.302,” then “OK” on the following screen.

The next screen will show you the computers in the room (you can use the scroll bar on the right-hand side to check them all). Computers that are turned off will be displayed in gray.
To turn on the computers, select those you want to turn on by hitting Ctrl+click on each, and then selecting from the menu: Student > Power Management > Power On.

After you click “Power On,” the computers should start turning on. After all you need are turned on, you can connect them to the podium by selecting on the menu: School > Manage Class > Refresh:

After you click on “Refresh,” you should see the computers that are connected highlighted in green:
Once the subjects log into the computers (or, alternatively, once you log into each computer yourself), you can connect them to your z-Tree channels. To connect computers to each of the channels, select the computers with Ctrl + click, and then select from the menu: Group > Launch Application.

Then you will see the different channels to which you can connect users. Click on the desired channel and then click on “Launch.” Due to regular lab maintenance, Channel icons in the graph below might be missing. Simply click “Add” button, select “All file types,” and find channels in “C:\zTree,” then icons will appear again.

Each channel has two icons, one with default setting, the other with font size of 22.

After you have connected the computers to the desired channels, you can go back to the z-Tree files you opened at the beginning and start running the experiment.

**Save the data:**
When your session is over, the file(s) with your data can be found in “C:\zTree.” Sort the files by “Date Modified” (from newer to older), and yours should be on top:
You absolutely **HAVE TO SAVE YOUR DATA TO A PERSONAL DEVICE** (external drive, self-email, etc.) at the end of your session.

It cannot be stressed enough: your experimental data is YOUR RESPONSIBILITY. LBOE and the Jindal School of Management cannot be held responsible if you leave the room without having saved your experiment files.

The files stored in “C:\\zTree” will be wiped away periodically, so you absolutely need to back up your files before you leave the room after your experiment.

Before you leave, you have to close the z-Leaves in each of the computers (you need to hit Alt+F4 in each of them), and then turn them off from the podium. Go to the menu and click **Group > Select**.
Then select All > OK.

Then go to Student > Power Management > Power Off.

Please note that NetSupport will not be able to log off those computers whose z-Leaf screens remain turned on, so remember to hit Alt+F4 on each of them before attempting to use Power Management.

After all computers are off, remember to log off the podium and please make sure lights and projector are off when you leave.

If you have any questions or comments about this guide, please contact LBOE Lab Co-Director Elena Katok.
FAQ

1: Q: Do I need to read the Guidelines before I run my experiment?
A: Yes, it is the only way that you can learn how to effectively handle your experiment. The LBOE lab is designed to be DIY. The Guidelines are concise and up to date. Follow the Guidelines and run a test experimental session before your formal session to get familiar with the lab. If you still have any questions after your test session, feel free to contact the lab manager. The email address of the lab manager can be found on the LBOE website. There is also a PPT file available that helps you quickly set up the lab. Ask the lab manager if you need it.

2: Q: When should I arrive at the lab?
A: At least 60 minutes before the start of your formal experiment. Before you arrive, you need to have the following items ready: a) checkout forms, b) instructions, c) consent forms, d) cash and e) attendance list. Check the ID of each subject to make sure that the name matches the attendance list. There are pens and small calculators in the lab cabinet.

3: Q: What if the public printers on the 2nd & 3rd floor of JSOM or my office printer are out of order?
A: That is why you need to be well prepared and get all your papers ready before you arrive at the lab. Anything can happen that can potentially jeopardize your experiment and therefore waste the money. As a backup, the lab printer is also available. Simply use the computer located next to the printer, and select “LBOE_Printer”.

4: Q: Is every computer in the lab working perfectly?
A: We try our best to maintain the lab in the best possible condition. However, technical problems do arise from time to time and some computers in the lab may not be usable. Try to avoid those computers that are marked with “X” on the flash card with the computer number in front of each cube.

5: Q: Is Netsupport the only way to control the lab?
A: Not necessarily. It is the most efficient way, but not always the most reliable. Whenever you have problem with Netsupport, simply try to set up the lab manually by handling clients individually. Just like the way you test your program in your personal laptop, you simply need to connect zleaves to zTree. To manually do this in the lab, first start the zTree channel X from podium computer, and then start the zleaf channel X (same channel number as the zTree channel) located in the c:/zTree/ in each client computer.
6: Q: Who can help me if I really need help?
   A: First, check the Guidelines again. Second, for any questions about zTree, try the zTree manual found here: [http://www.iuwz.ch/zTree/index.php](http://www.iuwz.ch/zTree/index.php).
   You can also ask the lab manager whenever you need help with the lab processes.

7: Q: What is the current version of Ztree in the lab?
   A: Currently, the Ztree version is 3.4.2. It is the most recent stable version released on September 6, 2013. Please make sure that you use the same version for your program. If you need a copy of the version used in the lab, send an email to the lab manager for help.

8: Q: How many subjects should I recruit?
   A: Generally, release 40% more spots as back-ups. At the same time, you may want to send invitation letters to 8~10 times of spots you need. Note that all the students are able to see the spots released, regardless of whether they received the invitation letter or not. In other words, invitation letter here is a reminder letter.
Technical Support
(This section is only for lab manager and technical team)

To POWER ON the computers using net support
Do the following steps one time to enable the power on using netsupport in the subject computers

Step 1:
- Go to BIOS (Press F2 at start up)
- Power management → Deep sleep control → Select the radio button “Disabled” → Click Apply

Step 2:
- Wake on LAN → Select radio button “LAN only” → Click apply → Exit. You are done!