

Research and the EBL

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General

The Erasmus Behavioural Lab offers sophisticated research facilities, financed by FSW-Psychology, ERIM and the CvB.

This document tries to give an overview of the possibilities and expected behaviour within the EBL. The thought is that each section presents an overview from a different perspective, some information will be repeated because of that.

The EBL gives researchers many preconfigured setups to conduct psychological and behavioural research. In the section “Facilities” you can find an overview of the possibilities offered at the moment.

The EBL is primarily available to researchers from FSW-Psychology and researchers affiliated with ERIM, and to their assistants/PhD’s etc.

Practice has learned us that it is necessary to regulate a number of things, when we want to use the EBL in an optimal way. In the section “[Usage by Role](#)”, a number of usage-scenarios with some practical guidelines are presented.

In general, the EBL staff offers advice and service in preparing and conducting research in a wide range of areas. The number of employees however is limited, so building a complete experiment, an on-line questionnaire etc. is principally done by the researchers, AiO’s/PhD’s, volunteers or students themselves. With the more technical aspects the EBL staff advises or gives support in the development or construction of the experiment.

The EBL has a number of employees that mainly have the task of maintaining all facilities. Besides that, regular user support within the EBL is available on the subject of usage of the computers, the software and specific EBL equipment. An extra task is the support of specific EBL (installed and maintained) software at the office-computer of researchers at Psychology and researchers affiliated with ERIM. Several practical matters can be dealt with directly by one of the employees of the EBL, like assigning keys, borrowing equipment, etc.

In general, we would encourage anyone that wants to use the EBL (especially for the first time), to make an appointment upfront, even before beginning the design of an experiment. The EBL staff has a lot of experience in designing, setting up, supporting research and analysing data, so please make use of that knowledge and experience.

Depending on your needs, the meeting can be briefly or more elaborative, but will also give us a good insight in what’s happening in the lab.

In the future, more links to specific instructions or manuals will be added to this document. You can always find the latest version of this “EBL starting point” at: <http://ebl.eur.nl>, click on “Research and the EBL”. Manuals can also be found in the EBL Assistant.

Eating, drinking, having lunch is NOT allowed in the lab-rooms or control rooms. You can only use a bottle or cup of water within the EBL area. Plan time to have breaks during your research.

You are also responsible for the instruction, guidance and behaviour of your participants in the EBL, please also tell them upfront that eating, drinking, using cellphones or talking loud is NOT allowed in the lab-area, including the waiting room.

Facilities

General

A number of facilities can be used in (combination with) any study, in any room within the lab. Think about using a microphone, speakers or headphones, but also the use of equipment for recording physiological measures like heart rate or skin conductance (arousal). There is also the possibility to use E-prime button boxes to measure response times very accurately.

Furthermore, some facilities are available to prepare stimuli-material. Think of equipment to digitise audio, video, photographs and other material, as well as edit it. A more detailed (and growing) list of available equipment and software can be found in annex A. If what you need is not on the list, please consult the EBL staff. Subject stations have a more restrictive set of available software.

If you want to use the pantry just outside the lab at T12, please clean-up immediately, make some new coffee if it runs out. The pantry is part of Psychology, but if used properly, users of the EBL may continue to use it.

Please note that only water is allowed in the EBL area.

Lab rooms

waiting room

On signs/directions that mention the EBL on the campus, near to the EBL also the waiting room is mentioned. In the waiting room, 14 persons can take a seat and wait for their appointment. A remotely viewable camera is mounted in the waiting room, the image can be viewed on any computer in the lab in real time.

Please use the fact that the lab and the waiting rooms are mentioned on applicable signs throughout the campus. Use these names in your communications with subjects and avoid mentioning specific rooms. If participants all go directly to the waiting room, they are not searching throughout the lab for the specific room, possible causing disturbance in some way. This construction may require you to walk some more, but will support the quality of research in general. And you have the camera to watch the waiting room.

4-persons labs (6 labs)

Each room has 4 computers available. The tables in these labs are separated by room dividers. In 2 of the labs (room 5 & 6), special hardware is available for presentation of very fast stimuli, up to 200Hz at a resolution of 800x600 pixels and 32-bits colours (4 billion).

The other 4 rooms have 22" TFT widescreen displays that display up to 1920x1200 pixels in a 16:10 ratio. In room 6, tables can be equipped with custom response buttons on request.

2-persons labs (4 labs)

Each room has 2 computers available. The tables can be separated by room dividers. These rooms can be used for 2 subjects, or in a situation where the researcher works with one subject together in a lab. Also, after consult, the set-up of the room can be changed for special studies. All 4 rooms have 22" TFT widescreen displays that display up to 1920x1200 pixels in a 16:10 ratio, on both computers.

cubicles

Divided into 3 sections, the lab has 12 medium-sized and 16 full-sized cubicles available. In the separate supervisor room, 4 computers are available to control all computers in the cubicles.

With several “Assistants” (computer programs) computers can be switched on or off, but also an experiment or other data can be copied to any number of cubicle-computers. Additionally, gathered research data can be easily collected after conducting the study, also with the help of the “Cubicle Assistant”.

The 12-persons section now has 19” TFT screen with a resolution of 1280 x 1024 and a ratio of 5:4.

Both 8-person sections have 22” TFT screens with a resolution of 1920 x 1200 and a ratio of 16:10.

Optionally, the cubicles can be equipped with response boxes, microphones and/or web camera’s.

eeg-labs (2 labs)

EEG labs with amplifiers and caps for 32 or 64 channels. Additionally, skin conductance, heart rate and respiration can be measured. Also an option for 32 extra channels is available, to measure for example muscle contractions in several spots.

Stimuli can be presented up to 200Hz, 800x600 pixels and 32-bit colours at a 22” (50 cm diagonal) 4:3 CRT screen.

Analysis can be done with Brainproducts Analyser and BESA, of which several licenses are available in all Support Rooms of the EBL.

Usage of these specific rooms with their complex equipment will have to be guided intensively by research staff. Instruction on usage will have to be done by an experienced research staff member with ample knowledge.

Employees of the EBL can advise and support, but cannot (yet) take charge of the guidance and instruction.

video-labs (2 labs)

Rooms with equipment for digital audio- and video-recording, which can be uploaded to a video-conversion service or written to a DVD. In each observation rooms, up to 6 people can be seated, depending on the layout. The supervisor room has place for 2-3 persons.

The camera’s in the observation rooms can be panned, tilted and zoomed from within the control room, where 2 sets of equipment are available.

eye tracking labs (3 labs)

In 2 separate rooms, 2 Tobii eye trackers type 2150 are available, that have a 21” (1600x1200) screen area and a 50Hz sample-rate. Separated by a room divider there is a seat for the experiment supervisor who, depending on the type of study, needs to use one or two workstations to control the eye tracker and present stimuli. The EBL staff can support the integration of eye tracking communication in an experiment that is built in E-prime.

Besides that, the third eye tracker room has an Eyelink 2K eye tracker available, which can sample at 1000Hz binocular or even 2000Hz monocular. Stimuli can be presented up to 200Hz, 800x600 pixels and 32-bit colours at a 22” (50 cm diagonal) 4:3 CRT screen, similar to the set-up in the 4-persons rooms.

Stimuli can be presented with E-prime. When however, specific interaction is needed between the eye tracker and the stimuli-program, it needs to be built in C, Perl or Python or the SR-Research Experiment Builder. The knowledge and

experience needed for that does not (yet) exist in the EBL. The expectation is that this will be the case after Q2 of 2012.

12-persons labs (2 labs)

These rooms have room for 12 people. There are 4 tables and 12 chairs, but no additional technical infrastructure. A computer can be placed on demand.

Paid subjects

The EBL manages the EURO subject pool. This pool holds prospective subjects, that are willing to participate in a study in return for a fee.

This system works in similar fashion as OASE (Psychology) and is of the same make as the course credit system of RSM (ERPS).

After posting a new study, subjects can subscribe to it and optionally choose a time slot. At the moment the system does not offer mass mailings to prospects.

More details can be found in the section "[Administration](#)".

On-line research

Several possibilities exist to conduct on-line research. Some tools are more suited to conduct on-line questionnaires, others are suited to do on-line reaction time measurements.

On-line questionnaires can be easily built and managed by software from Qualtrics, for which both ERIM and Psychology have a (separate) license.

ERIM members can access use Qualtrics through a single-sign-on location, while Psychology users have to send a request to the EBL staff.

When it is necessary to measure reaction times on-line, we have the possibility to use Inquisit from Millisecond.com. With this software, one can build a experiment-script that can be executed on a Windows computer, or (in unaltered form) through a DirectX enabled browser.

The design of an Inquisit script demands a lot of attention and requires programming/scripting skills at a reasonable level. The EBL has limited expertise to support this, but is resource wise not always able to construct complete experiments with Inquisit. A web-license for Inquisit will need to be provided for by the researcher.

Experiments, research-data and backups

The responsibility of safe-guarding experiment files, executables, stimuli and gathered research-data is primary at the researchers own shoulders. The EBL does **not make backups** of data, but merely leaves them on the computers for the duration of the academic year. Backups are also **not** made of data at support-room computers.

During the summer period, all computers will be re-installed and all data will thus be erased from the disk(s). One exemption from this rule are the computers in the EEG lab.

Furthermore, for safety and stability reasons, it is prohibited to use portable data-devices in the EBL. This is only allowed in one of the before-mentioned Support Rooms, or one of the 4 control-stations for the cubicles.

So, it is of vital importance that after each day or session, you, or your assistant(s) use the “EBL Assistant” utility to upload the gathered data to our servers, after which you can retrieve the data at your workstation in the staff network (Psychology & RSM). If you then place it on your network drive, it will be backed-up by your IT department, probably the following night.

For non-RSM/Psychology users, the EBL Assistant is available to transfer the data gathered in a lab room, to one of the Support Room computers or control stations of the cubicles, at which you may connect a portable drive or usb-stick in order to transfer your valuable data to your network drive in your staff network.

Further information about the EBL Assistant can be found in it's help file.

If you work at RSM or Psychology, you can request access to the EBL Assistant at your staff computer by contacting us. (See section “[Contact information](#)”)

Software availability

Stimuli-software

The primary software used to run experiments in the EBL, is E-prime. In all of the lab-rooms, a run-time version of E-prime (e-run) is available, in the Support Rooms the full version, E-studio is available to adapt or develop your experiments in E-prime.

On request, Neurobs Presentation or Millisecond Inquisit Desktop Client is available for use in an arbitrary lab.

Furthermore, the following software is available on request:

- Audacity (for subject audio recording)

Support and Analysis software

In the Support Rooms, the following specific or generic software is available for preparation, analysis, management and visualisation of research data. The software is available on some, or all of the computers in the Support Rooms. Sometimes the number of concurrent users is limited by the number of licenses that is available.

- Brain Products Analyzer (EEG data analysis)
- Matlab (with or without SPM for fMRI data)
- Prism GraphPad (Scientific Graphing)
- BESA
- SPSS
- Microsoft Office
- Adobe Creative Suite 4 (Photoshop, Illustrator, Indesign, Acrobat, Flash, etc.)

- Microsoft Paint.net
- Apple iWork, iLife (iMovie, iPhoto, Pages etc.)
- Apple Final Cut Studio (Final Cut Pro, Soundtrack Pro)
- ELAN (subject video recording scoring management and support)

A detailed overview of installed software can be requested through the EBL Assistant on any computer in the Support Rooms.

However, the fact that a certain software product is installed on one of the computers does not immediately mean that it also has a valid license.

You just have to try running it. We have limited licenses available for the following software:

- Brain Products Analyzer
- Matlab
- Prism Graphpad
- BESA

Sometimes the software has to be installed on demand. In that case, please contact the EBL staff. (See section "[Contact information](#)")

Usage by role

General

Students are **not** allowed to work solo outside office hours. Someone from the staff needs to be in the vicinity and available when students want to use the EBL during evening hours or on Saturday. These arrangements need to be made upfront when applicable. This rule is instated for the safety of both the student and the subject.

In your communication with subjects, please use the fact that directions to the EBL also include directions to the waiting room.

In the waiting room a camera is mounted. The image can be viewed on any computer in the lab. Experiment supervisors can easily monitor the arrival of participants in this way.

If your study contains some kind of “pun” or manipulation that they should not tell about to newly arriving subjects, you can use the exit door in the closed elevator section of the lab to have your participant leave the lab after the session.

Researchers Psychology

As said at the start of this document, before starting a study (especially one that involves the more “technical” aspects of the EBL) please consult the EBL staff, which has a lot of practical knowledge when it concerns the research process in general. This can be just a short checkup of the process involved and does not have to take a lot of time.

If one of your assistants or students is starting a study in the EBL, you are required to make an appointment together with them with the manager of the EBL, to discuss and co-ordinate what is needed from the EBL. The assistant or student is not allowed to arrange this first appointment themselves.

Furthermore, some practical things:

- Keys to all lab rooms are managed by the key cabinet close to the entrance of the EBL. A pin code is needed to access the keys, please see the section on keys to find out all details on this.
- To book the EBL, please request activation of your login at the administrator.
- OASE is the place to make use of the obligatory subject hours that students have to fulfil during the first 3 years of their study.

(See section “[Contact information](#)”)

Students Psychology

In case of any special wishes or demands in connection to the study you will be conducting, please request a meeting through you supervising researcher, with manager of the EBL. The first meeting will always have to be attended by your supervisor.

Request a log-in for the booking system within PsyWeb (See section “[Contact information](#)”). This will automatically generate a PIN for the key cabinet, but not give you access to any lab rooms. Please specify which lab rooms you will need and send a request to the EBL staff to assign the correct keys to your account.

In case of problems, contact the EBL staff. (See section “[Contact information](#)”)

Getting Subjects:

Studies are broadcasted within OASE by the supervising researcher from the staff, the student has the role of experiment-supervisor and is added as such to the definition of the study.

AiO Psychology

Studies are placed in OASE by the user her/himself, they also take the role of experiment-supervisor and add themselves as such to the study.

Request a login for the booking system at the EBL staff.

This will automatically generate a PIN for the key cabinet, which will give you access to any regular lab room.

In case of problems, contact the EBL staff. (See section "[Contact information](#)")

Volunteer Psychology

Studies are placed in OASE by the supervising researcher, the volunteer acts as experiment-supervisor and is added to the study as such.

Request a login for the booking system at the EBL staff.

This will automatically generate a PIN for the key cabinet, but not give you access to any lab rooms. Please specify which lab rooms you will need and send a request to the EBL staff to assign the correct keys to your account.

In case of problems, contact the EBL staff. (See section "[Contact information](#)")

PhD candidate RSM/ESE

In case of any special wishes or demands in connection to the study you will be conducting, please request a meeting -through your supervising researcher- with manager of the EBL. The first meeting will always have to be attended by your supervisor.

Request a login for the booking system at the EBL staff.

This will automatically generate a PIN for the key cabinet, which will give you access to any regular lab room.

In case of problems, contact the EBL staff. (See section "[Contact information](#)")

Researcher RSM/ESE

In case of any special wishes or demands in connection to the study you will be conducting, please request a meeting with manager of the EBL.

Request a login for the booking system at the EBL staff.

This will automatically generate a PIN for the key cabinet, which will give you access to any regular lab room.

In case of problems, contact the EBL staff. (See section "[Contact information](#)")

Administration

Booking system

The EBL booking system is the place to reserve space and time in the lab. It is an on-line booking system which requires an ERNA-style login and password. Before you can login to the booking system, your account needs to be activated. See "[Usage by Role](#)" on how to achieve this.

If, for some reason, you need to contact other users of the booking system, for example to discuss a booking made by another researcher, please look at the ERNA account and search for their email-address under "User list". (upper right side)

Keys

Starting January 2012, the EBL is using a key cabinet to issue keys to all users. All previously issued keys should be returned to the EBL. The key cabinet is located near the entrance of the EBL and hold individual keys to all lab rooms.

Access to the key cabinet and thereby all regular lab rooms is automatically given to staff members of both ERIM and Psychology who request a login for the booking system.

Students also automatically receive a PIN when applying for an account for the booking system, but have to specifically indicate which labs they need access to.

Once you have acquired a key for usage, using your personal PIN, you will be held responsible for it until you return it to the cabinet. The lab room for which you took a key, can be used subsequently by another researcher, so it is of vital importance that you return a key immediately after the period you have booked in the lab has expired. It is forbidden to take a key with you when you leave the lab area, you have to return it then. So basically this means that keys do not leave T12.

All accesses to the key cabinet will be logged and recorded.

In case of any questions, please contact the EBL staff.
(See section "[Contact information](#)")

Subjects

Depending on the context you're working in, in the EBL, you all are going to work with subjects. Please treat them fairly, also when they ask "stupid" questions or run late. You and other researchers depend on their good will.

On the other hand, do not hesitate to tell them clearly what the expected behaviour in the lab is.

Please make sure you are briefing and de-briefing participants correctly, so they understand what the purpose of the study is, and learn something from the experience.

OASE

OASE stands for "Onderzoeks Administratie Systeem EBL" and it manages the obligatory subject participation of Psychology students.

It is embedded in the learning environment of Psychology, www.PsyWeb.nl.

Within PsyWeb, a short introduction of OASE can be found under “Onderzoek->Intranet->OASE”

EURO

The EURO subject pool is available to any researcher that has the possibility to pay subjects. It uses the same on-line system as ERPS, but logins are managed by the EBL. Every researcher places their own experiments and also approves them. No interaction from the administrator is needed to publish studies.

Every year, a mailing is done to attract new subjects to the EURO subject pool. A login for this pool can be requested at the administrator. (See section “[Contact information](#)”)

Participants are paid amount in the order of € 7,50 - € 10,- per hour.

ERPS

ERPS stands for ERIM Research Participation System and it is a course credit system supported by RSM and available to all RSM researchers. Studies are placed by the researcher and have to be approved by the administrator.

A login for this pool can be requested at the administrator. (See section “[Contact information](#)”)

Guidelines for booking

In general. If you find out, before or during your study, that you have booked too much time or space, you are obliged to free up the unused resources in the booking system immediately. Your colleague-researchers will be grateful for that.

It is not allowed to “speculatively” book space and then remove your claim just before, or after you have (not) used the lab.

Availability outside office hours: Members of the staff are allowed to use the EBL outside of office hours. Technical support, however, will not be available in the evening hours and on Saturday.

Furthermore, students are **not** allowed to work in the EBL outside office hours, unless a staff member is in the vicinity and available in case of emergencies.

Arrangements between students and staff should be made upfront for these occasions.

Cubicle labs

The guidelines for booking the cubicles are the following.

There are 2 sections of 6-cubicles and 2 sections of 8-cubicles and 4 supervisor workstations to support this setup.

It is not allowed to book several sections at once. The maximum booking period is one week for one section at a time.

In case the study needs a larger claim, please contact your co-ordinator for cubicle reservations. See section “[Contact information](#)”.

Video labs

Booking of one of the video labs always goes through one of the co-ordinators.

A request for booking of one or more rooms, possibly even months upfront, can be done with one of the co-ordinators. See section “[Contact information](#)”.

Other labs

All other labs can be booked independently, with the following restrictions.

No bookings longer than 4 hours and not before an appointment is made with a subject. Not more than 4 weeks upfront.

To clarify this, to make appointments with subjects, it is of course allowed to book several days and/or labs in the booking system, then immediately start making appointments and free up any unused time/labs when your “appointment-session” is finished.

Failure to do so will be recognized by the co-ordinators.

If you need a larger claim than the rules above allow, please contact the management of the EBL. See section “[Contact information](#)”.

Contact information

Co-ordination booking

Video labs(Psy):	Heleen van Mierlo (vanmierlo@fsw.eur.nl , 010 408 8691, T12-39)
Video labs(RSM):	Wendy van Ginkel (wginkel@rsm.nl , 010 4081946, T08-11)
Cubicles:	Daan Stam (dstam@rsm.nl , 010 4082007, T10-49)
Other labs:	beheer-eb1@fsw.eur.nl

Support

Keys/Equipment:	Christiaan Tieman (tieman@fsw.eur.nl , 010 4089727, T12-36)
EURO:	Christiaan Tieman (tieman@fsw.eur.nl , 010 4089727, T12-36)
ERPS:	Anne-Sophie Lenoir (alenoir@rsm.nl , 010 4088750, T10-10)
Computers:	Marcel Boom (boom@fsw.eur.nl , 010 4082038, T12-34)
EBL Assistant:	Marcel Boom (boom@fsw.eur.nl , 010 4082038, T12-34)
Software availability:	Gerrit Jan de Bie (deb1e@fsw.eur.nl , 010 4088796, T12-40)

Web locations

EURO system:	http://www.eur.nl/euro
ERPS system:	http://erps.sona-systems.com
Booking system:	http://booking.ebl.eur.nl
Psychology student-login request for the booking system:	“PsyWeb->Onderzoek->Intranet->EBL->Login aanvragen”

For all other matters or emergencies, please contact Gerrit Jan de Bie (deb1e@fsw.eur.nl, 010 4088796, T12-40)

Annex A

Hardware

- foot pedals, to be used with E-prime
- big standing or tabletop pushbutton, to be used with E-prime.
- pushbuttons in different shapes and sizes, that can be built-in into the table-top of certain labs, to be used with E-prime and possibly other stimuli-software.
- standing lamps, webcams, video camera's
- bright white led's, to be mounted with Velcro at any position, controllable from E-prime and possibly other stimuli-software.
- tactile stimulus, vibrating fingertip-actuators.

Special measurements: Smokerlyzer(CO), hearing-test, autonomous measures (heart rate, skin conductance), alcohol tester, light meter,

Audio/video equipment: memo recorders, audio-video editing station (digitise), mobile hi-fi audio stimuli recording station.

Software

Support rooms:

- Adobe CS (Photoshop, Acrobat, Fireworks, Flash, etc.)
- Brainproducts Analyzer, BESA (EEG analysis)
- Prism GraphPad (2D plot design, support rooms only)
- Microsoft Office (only at non-subject computers)
- Adobe Audition (audio editing)
- Matlab (on request)

Subject stations:

- E-prime (V2)
- Presentation (on request)