



Data Usage Agreement

This Data Usage Agreement is effective 05/01/2023 ("Effective Date") by and between EDUCATIONAL TESTING SERVICE, a nonprofit, nonstock corporation organized and existing under the Education Law of the State of New York, with principal offices at Princeton, New Jersey 08541 (hereinafter "ETS"), and Diego Figueiras, with a principal location at Montclair State University, 1 Normal Avenue, Montclair, NJ 07043 (hereinafter the "Researcher").

WHEREAS, ETS is the owner of all right, title and interest and into certain data which has been made available to Researcher in response to Researcher's research proposal as described in the attached Exhibits A and B (hereinafter, the "Data");

WHEREAS, Researcher has requested the opportunity, under the guidance and signed support of the faculty advisor, Michael Bixter (see Exhibit C), to use TOEFL iBT Public Use Dataset 1 and TOEFL ITP Public Use Datasets 1 and 2. ETS is willing to agree to such research, subject to the terms and conditions of this Agreement; and

NOW, THEREFORE, in consideration of the foregoing premises and mutual covenants contained herein, ETS and the Researcher, intending to be legally bound hereby, agree as follows:

1. LICENSE

- a. Upon ETS's receipt of the License Fees and a fully executed Agreement, ETS hereby grants to the Researcher a limited, non-exclusive, revocable, non-transferable license to perform the following enumerated rights with respect to the Data solely for non-commercial, research purposes to reproduce and copy the Data as reasonably necessary for the Researcher to conduct the academic, non-commercial research anticipated herein, and solely as described in the attached Research Proposal (Exhibit B), in accordance with the terms and conditions of this Agreement;
- b. Notwithstanding Section 1(a) above, In the event the Researcher desires to lecture or publish any manuscripts, abstracts, papers, including, but not limited to a thesis, or public releases of scientific merit (including conference proposals and presentations) describing results of the work (each a "Publication"), the Publication shall first be submitted to ETS, in its full and final textual form, at least thirty (30) days prior to submission to any third party. In the event that ETS wishes to preserve its rights with respect to any intellectual property or Data disclosed in the Publication, submission and/or publication of the proposed Publication by Researcher shall be postponed upon ETS's notice for a maximum of an additional thirty (30) days, or such longer period as agreed by the parties, to permit ETS to protect any and all rights in the Publication, including, without limitation, patent



rights. ETS shall further have the right to suggest revisions to the Publication as are necessary to protect any and all trade secrets, and Researcher agrees to make such revisions as are necessary to protect any and all trade secrets or intellectual property.

- c. In the event that Researcher produces a written work and/or Publication that incorporates the Data, including but not limited to a research report, Researcher agrees to acknowledge the Data as property of ETS by displaying the following attributions:

“Source: Derived from data provided by Educational Testing Service ETS

Copyright © 2021 ETS. www.ets.org”

- d. Researcher must also include the following disclaimer language in all Publications:

“The opinions set forth in this publication are those of the author(s) and not ETS.”

- e. Limited Faculty Advisor Rights. The foregoing license shall include the right for the Researcher’s faculty advisor, or such other faculty member of the Researcher’s university responsible for overseeing the Researcher’s research, to monitor, supervise, and advise the Researcher with respect to such research provided such faculty member agrees and adheres to the provisions of this Agreement.

2. FEES; FORMAT OF DATA

License Fee: The Data will be provided without a license fee for use of Data.

Format of Data: The Data will be provided to Researcher in three Excel files.

3. RESTRICTIONS

The rights to the Data granted to the Researcher pursuant to this Agreement shall be subject to the following restrictions:

- a. the license set forth in Section 1 shall permit research to be conducted only by the Researcher solely for purposes as set forth in the attached Exhibit B. Access shall be provided only to Researcher’s staff who are conducting the analyses and interpretation of the Data and who have been made aware of, and have agreed to abide by the terms of this Agreement;
- b. the Researcher shall not license, rent, lease, sell, distribute or otherwise transfer the Data, or any copies thereof, in part or in whole, to any third party;
- c. the Researcher shall not commercialize, attempt to commercialize the Data or otherwise obtain commercial gain or benefit from his or her use of the Data;



- d. the Researcher acknowledges and agrees that the Data he/she is receiving is not personally- identifiable data. Further Researcher agrees that he/she will not attempt to compile or match up Data with other personal data so that any individual(s) may be identified;
- e. Researcher may include the Data in the aggregate in reports, but may not reproduce the Data in any format. Upon termination or expiration of the Agreement, whichever comes first, Researcher will permanently destroy these Data, and any and all copies thereof and shall send written certification to ETS that all Data have been permanently destroyed; and
- f. the Researcher shall use the Data solely for the purpose of this Agreement and shall not disclose any of the Data to any third party. The Researcher shall exert reasonable efforts (no less than the protection given its own confidential information) to maintain such information in confidence.

4. PROPRIETARY RIGHTS

- a. Ownership of Data. ETS shall be the sole and exclusive owner of all right, title, and interest in and to the Data including all intellectual property rights thereto. Except for the non-commercial, research license set forth in Section 1, no other rights or interests are transferred by or through this Agreement in the Data from ETS to the Researcher, or any other third party.
- b. Security and Notification. Researcher shall ensure that the Data is secure and kept confidential at all times and shall take necessary steps to prevent any unauthorized disclosure or use of such Data. The Researcher shall immediately, upon discovery of any disclosure not authorized hereunder, notify ETS and take reasonable steps to prevent any further disclosure or unauthorized use.
- c. Return or Destruction. Upon completion of the research proposal (Exhibit B), expiration or termination of this Agreement, or upon written notice from ETS, the Researcher shall cease using the Data; return to ETS, the Data, together with any copies, notes or extracts thereof; or destroy the Data in possession of the Researcher including any copies, notes or extracts thereof. Further, the Researcher shall certify, in writing, his or her compliance with the requirements of this Section. Researcher may retain any analysis, research reports and publications which were created prior to the termination of this Agreement.

5. EXCLUSION OF WARRANTIES

The Data provided by ETS to the Researcher under this Agreement is “as is” and without any warranty, of any kind. ETS disclaims, and the researcher hereby waives, all express, implied and/or statutory warranties, including but not limited to implied warranties of merchantability and fitness for a particular purpose.



6. LIMITATION OF LIABILITY

In no event shall ETS be liable to the Researcher, regardless of the form of action or theory of recovery, in association with this Agreement, for (a) any indirect, special, exemplary, consequential, incidental or punitive damages, even if that party has been advised of the possibility of such damages; (b) lost profits, lost revenue, lost business expectancy, benefit of bargain damages, business interruption losses or loss of data; or (c) direct damages or any kind. Furthermore, any claim arising out of this Agreement which may be permitted against ETS must be initiated within one (1) year of the date that such claim actually arose.

7. INDEMNIFICATION

The Researcher shall defend, indemnify and hold ETS and ETS's officers, directors, employees and agents harmless from and against any and all claims, demands, suits, damages, losses, costs, fees, (including actual attorney fees), expenses, judgments, liability, penalties and fines of any kind or nature arising out of or in connection with the Researcher's use of the Data, or otherwise arising as a result of, or related to this Agreement.

8. TERM

- a. Term. This Agreement shall be effective as of the effective date and shall continue in full force and effect during the earliest to occur: completion of the research as set forth in Exhibit B, or for a period of one (1) year, unless terminated earlier in accordance with this Section.
- b. Termination. ETS or the Researcher may terminate this Agreement, for any reason, by providing written notice to each of the parties hereof of its intent to terminate this Agreement. In the event such notice is provided, termination of this Agreement shall be effective on the 30th calendar day following receipt of such notice.

9. IRREPARABLE HARM

The provisions of Sections 1, 3, and 4 of this Agreement, relate to unique and valuable assets of ETS. Breach or threatened breach of these sections will result in irreparable harm to ETS and remedies at law for such breach or threatened breach will be inadequate. In the event of a breach or threatened breach of Sections 1, 3, or 4, ETS shall be entitled to specific performance and/or injunctive relief, without any requirement to post a bond or other security. Such remedy shall not be deemed to be the exclusive remedy for any such breach of this Agreement but shall be in addition to all other remedies available at law or equity.

10. REPRESENTATIONS AND WARRANTIES



- a. Researcher represents and warrants that it is empowered under applicable laws to enter into and perform this Agreement and that it has caused this Agreement to be duly authorized, executed and delivered by and through a person with the authority to execute the Agreement on its behalf.
- b. Researcher represents and warrants that all research performed hereunder shall be reviewed and approved by the Institutional Review Board at the Researcher's institution.
- c. Researcher further represents and warrants that it will comply with any and all laws, rules and regulations, throughout the world, which are applicable to the performance of its obligations under this Agreement, including all applicable laws, rules, and regulations relating to privacy and data protection.

11. GOVERNING LAW

This Agreement shall be governed by the federal laws of the United States and the state laws of the State of New Jersey. In the event of any litigation related to this Agreement, the parties agree and consent to the exclusive jurisdiction of the State and Federal Courts located in the State of New Jersey, USA.

12. ASSIGNMENT

The Researcher may not assign this Agreement without the prior written permission of ETS. Any attempt to assign any rights, duties, or obligations that arise under this Agreement without such permission shall be void.

13. NOTICE

Any notice or other communication required or permitted in this Agreement shall be in writing and shall be deemed to have been duly given on the day of service if served personally or three (3) days after mailing, registered or certified, postage prepaid, and addressed as follows or to such other address as a party shall designate:

IF TO ETS:

External Data Request Coordinator (ExternalDataRequests@ets.org)

Educational Testing Service

660 Rosedale Rd, MS 20-T

Princeton, NJ 08541

IF TO RESEARCHER:

Diego Figueiras (student)



Montclair State University
1 Normal Avenue, Montclair, NJ 07043
Figueirasd1@montclair.edu
9739107679

Michael Bixter (Advisor)
Montclair State University
1 Normal Avenue, Montclair, NJ 07043
bixterm@montclair.edu
6302810210

14. SURVIVAL BEYOND TERMINATION OR EXPIRATION

The provisions of Sections 3 (Restrictions), 4 (Proprietary Rights), 5 (Exclusion of Warranties), 6 (Limitation of Liability), 7 (Indemnification), 9 (Irreparable Harm), and 11 (Governing Law), shall survive the termination or expiration of this Agreement.

Signature page follows.



SIGNATURES

IN WITNESS WHEREOF, the parties hereunder have executed this Agreement as of the day and year first above written.

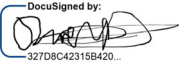
EDUCATIONAL TESTING SERVICE

By:  DocuSigned by:
Kadriye Erkan
5E3FCDE4A9E24C7...

Title: VP, Research and Measurement Sciences

Date: 4/20/2023

RESEARCHER

By:  DocuSigned by:
[Signature]
327D8C42315B420...

Title: PhD student

Date: 4/17/2023



EXHIBIT A

FORMAT AND DESCRIPTION OF DATA

The following materials will be shared by Laura Ballard, ETS employee, through a secure ETS OneDrive folder with Diego Figueiras:

TOEFL iBT Public Use Dataset #1: Item-level scores on the Reading and Listening sections of the test for a random sample of 1,000 examinees from each form (2,000 examinees total).

- 1 Excel file entitled “iBT_Public Use_Dataset 1”

TOEFL ITP Public Use Datasets: The two TOEFL ITP datasets come from two test forms and include item-level scores from the Reading, Listening, and Structure and Written Expression sections. Each form includes data from 10,000 examinees, and the examinee populations for the two forms do not overlap.

- 1 Excel file entitled “ITP_Public Use Dataset_4LTN02A”
- 1 Excel file entitled “ITP_Public Use Dataset_4LTN06A”



EXHIBIT B

DESCRIPTION OF MATERIALS USE

Project Title: Item Characteristic Curve estimation from common Classical Test Theory indices

Data Analysis Plan and Methodology

I will apply the IRT 2PL to item responses, and also note each item's p-value as well as its corrected item-total correlation. Each item's b and a parameter will be entered into the 2PL ogive formula to estimate the IRT-generated ICC:

$$P(\Theta) = \frac{1}{1 + e^{-1.7a(\Theta - b)}}$$

Next, the p-values will be placed on a normalized metric (z_g) and then further transformed to a metric more similar to the IRT difficulty parameter:

$$b_i \cong 0.000006957584 - (1.52731 * Z_g)$$

The corrected item-total correlations (r)'s will similarly be transformed to a metric more consistent with the IRT discrimination parameter:

$$\hat{a}_i \cong [(.51 + .02z_g + .3z_g^2)r] + [(.57 - .009z_g + .19z_g^2)\frac{e^r - e^{-r}}{e - e^r}]$$

These CTT-derived but IRT-scaled difficulty and discrimination indices will then be applied to the 2PL formula, and DIF will be calculated between the IRT- and CTT-informed ogives. There will be as many DIF calculations as there are items within the shared data file. Ideally I would do this with multiple scales. The way DIF will be calculated will be by computing the average area between the ICCs generated using the CTT vs IRT parameters.



EXHIBIT C

LETTER FROM FACULTY SPONSOR

(must be completed if project will be carried out by graduate student)

I, Michael Bixter (faculty name), have read the project
proposal and agree to oversee and support Diego Figueiras

(student name) in this project work. In overseeing this student and this project, I agree to do the following:

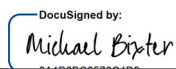
1. Before the project, ensure that the student obtains IRB approval for the project.
2. Before the project, ensure that the student signs an agreement regarding the project data.
3. During and after the project, ensure that the student submits all abstracts and conference proposals based on the proposed project to ETS at least 30 business days before submission for review and approval.
4. During and after the project, ensure that the student submits conference materials based on the proposed project to ETS at least 30 business days before the presentation for review and approval.
5. After the project, ensure that the student submits all manuscripts based on the proposed project to ETS's External Data Request Coordinator (ExternalDataRequests@ETS.org) for review and approval before submission to a publisher.
6. Ensure that the student includes in all dissemination the following ETS-approved disclaimer:

"Materials for this research were provided by Educational Testing Service (ETS) and the TOEFL program. ETS does not discount or endorse the methodology, results, implications, or opinions presented by the researcher(s)."

7. During and after the project, ensure that the student does not share or disseminate the ETS-provided data to anyone under any circumstance.

Michael Bixter

(Faculty name, printed)

DocuSigned by:

5A1B05C0570C4D9...

(Faculty signature)

4/18/2023

(Date)

Diego Figueiras

(Student name, printed)

DocuSigned by:

527D0C42515B420...

(Student signature)

4/17/2023

(Date)