# Using the Admitted Class Evaluation Service (ACES) to Conduct Institution-Specific Admission or Placement Validity Studies

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# Outline of Presentation

- Section 1: Why are we talking about Validity?
- Section 2: General ACES information
- Section 3: ACES Admission Validity Studies
- Section 4: ACES Placement Validity Studies
- Section 5: The National SAT Validity Study

# Section I

## Why are we talking about validity?

- Standards
- NACAC

# Validity Evidence

"Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests."

*Standards of Educational and Psychological Testing*

(AERA, APA, NCME, 1999)


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# Criterion-Related Validity

- Criterion-related validity (also referred to as predictive validity) looks at the relationship between a test score and a desired outcome.
  - A criterion-related validation study is completed by collecting both the test scores that will be used **and** information on the criterion for the same students
    - SAT scores and first-year college GPA
    - SAT writing scores and English 101 grades


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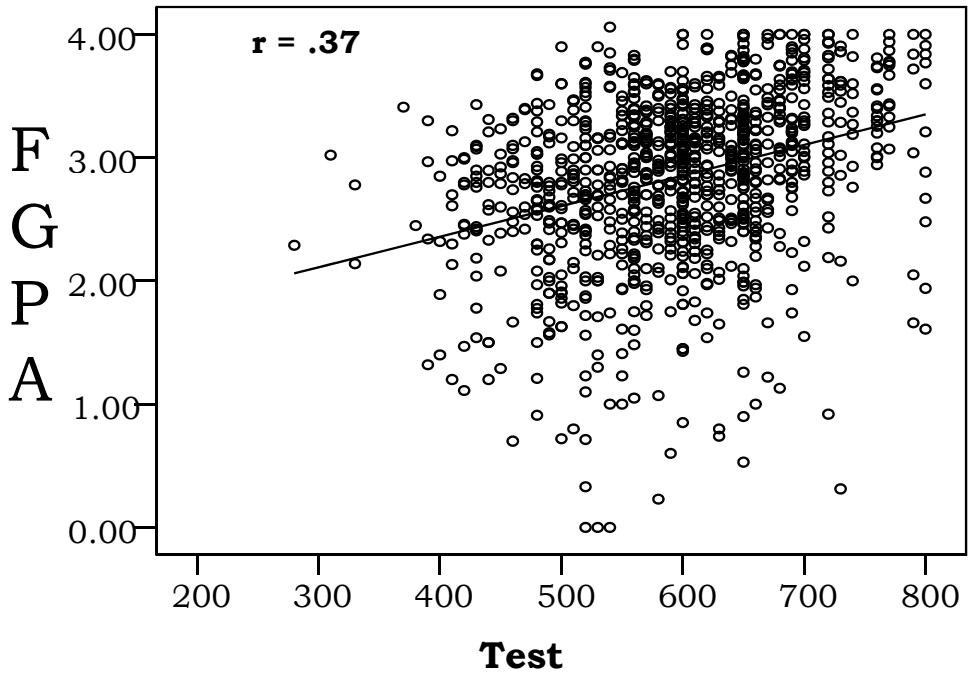
# Validating a Test for a Particular Use

- The most common approach used to validate an admission test for educational selection has been through the computation of validity coefficients and regression lines.
- Validity coefficients are the computed correlation coefficients between predictor variables and a criterion or outcome variable(s), which can determine the predictive validity of a test.
- A large correlation indicates strong predictive validity of a test to the criterion, however, a large correlation by itself does not satisfy all facets required of test validity.

# Correlation

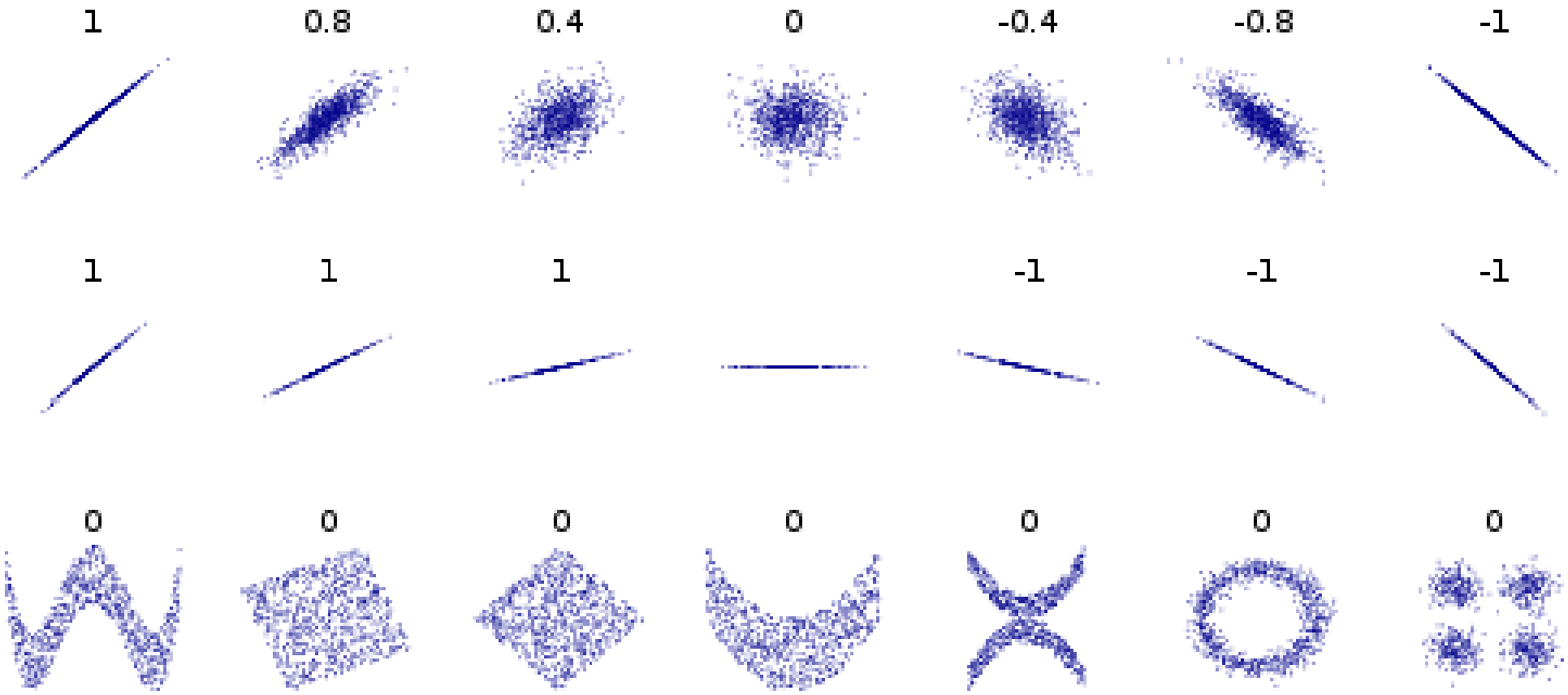
- Essentially, a correlation coefficient is a number between -1 and 1 which measures the degree to which two variables are **linearly** related.
  - Strength (absolute magnitude) and direction (negative/positive)



# Rule of Thumb for Interpreting Correlation Coefficients

- A general rule of thumb for interpreting correlation coefficients is offered by Cohen (1988):
  - small correlation has an absolute value of approximately 0.1
  - medium correlation has an absolute value of approximately 0.3
  - strong correlation has an absolute value of approximately 0.5 or higher

# Other Correlation Examples (nerdy indulgence)



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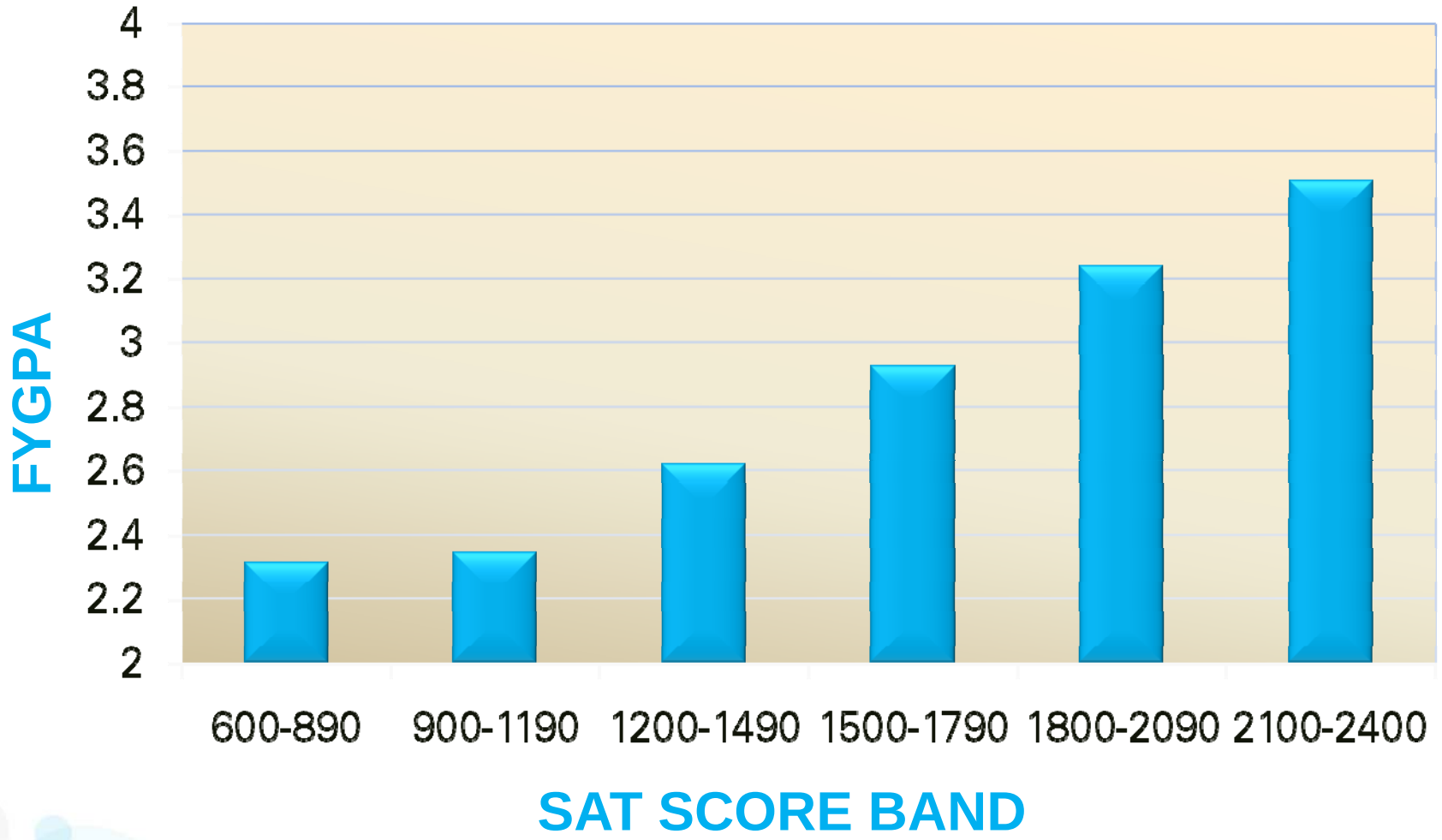
# Another way to think of a correlation of 0.54
# Mean FYGPA by SAT Score Band



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# Section II

## General ACES Information

# Admitted Class Evaluation Service (ACES)

- The Admitted Class Evaluation Service (ACES) is a free online service that predicts how admitted students will perform at a college or university generally (admission validity) and how successful students will be in specific courses (placement validity).

**http://professionals.collegeboard.com/higher-ed/validity/aces**


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# About ACES

- ACES offers two models of validity studies:
  - **Admission**
    - Predictive
  - **Placement**
    - Predictive (ACCUPLACER, AP, SAT, SAT Subject Tests)
    - Concurrent (CLEP)


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# Admission Validity Studies

- The primary purpose of an admission validity study is to confirm (validate) or improve current measures used in admission decisions.
- Will show how well admission criteria work alone and in combination with other predictors, *and* the most effective weighting for the predictors.
  - Success (the **criterion**) may be measured by college GPA and must be a continuous measure (not dichotomous)
  - Relevant **predictors** may be
    - SAT scores – Critical Reading, Math, or Writing
    - High school GPA, or Class Rank
    - Interview scores, and
    - Other information


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# Benefits of an ACES Admission Validity Study

- An ACES admission validity study will provide:
  - Information on the most useful predictors of success at an institution
  - Information allowing administrators to narrow the number of factors considered in the admission process without loss of predictive ability
  - Optimal equations for predicting the success of future students
  - A list of students at risk
  - A matched student-level data file for use in follow-up studies

# Requesting an Admission Validity Study

| | |
|---|---|
| 75 | • A minimum of 75 (complete) student records is required for an admission study. |
| 5 | • Can specify up to 5 additional predictors – either from ACES-supplied data or from institutional data (provided that 75 or more students in your sample have that additional variable). |
| 3 | • Results broken into three areas: gender, race/ethnicity, and best language spoken (provided that there are 75 or more students in the sample in at least 2 levels of the subgroup). |
| 2 | • Can specify 2 additional subgroups – either ACES-supplied (e.g. degree-level goal, ability rating in math), from institutional data (e.g. resident versus commuter), or a combination. |


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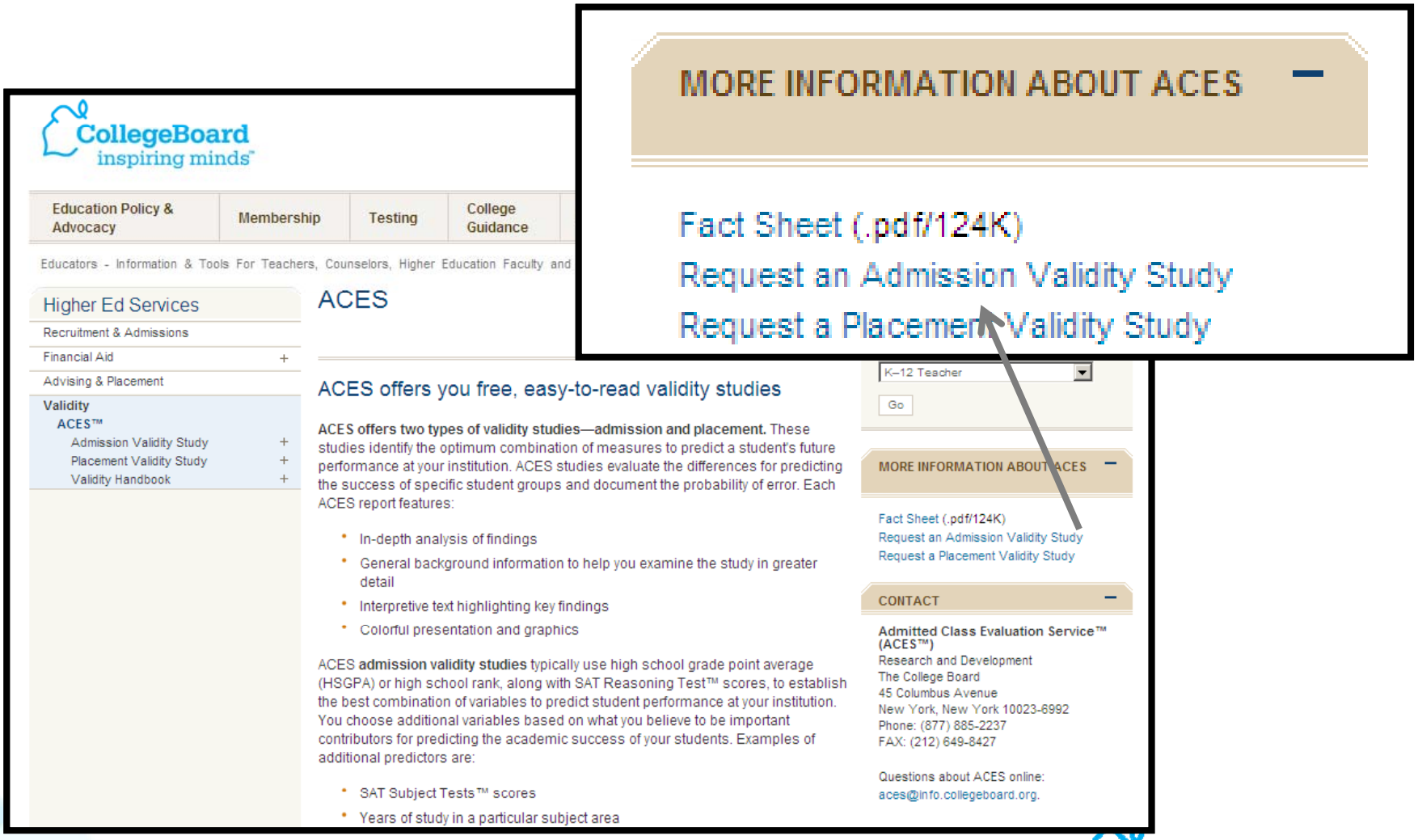
# Overview of ACES Process

- The institutional contact/submitter will:
  1. Click link on ACES web site for a new ACES study request: https://cbweb1s.collegeboard.org/aces/html/newrvs.html
  2. Enter contact info (name, email, position, institution, etc.)
  3. Design study (choose predictors, subgroups, etc.)
  4. Receive automatically e-mailed user account, password, and request number from ACES
  5. Login to submit data at this site: https://cbweb1s.collegeboard.org/aces/html/submit1.html
  6. Record all variable locations, indicate value labels, etc.
  7. Upload data file(s)
  8. ACES reports are returned to institutions 25 - 35 business days after the receipt of data.

# Section III

## ACES Admission Validity Studies

# ACES Web Site – Requesting a Study





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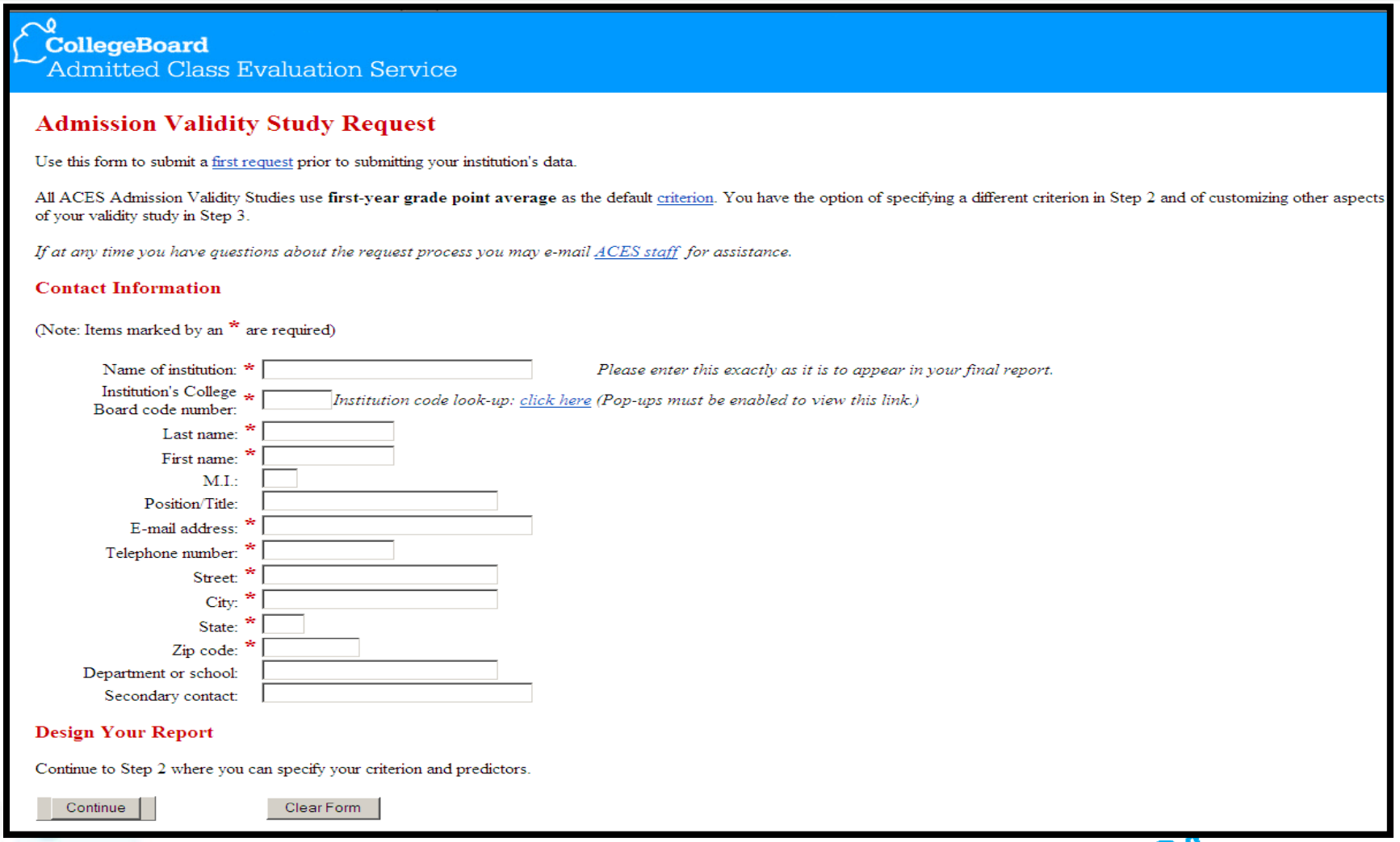
# ACES Web Site – Requesting a Study
## (contact information)



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**Admission Validity Study Request**

Use this form to submit a first request prior to submitting your institution's data.

All ACES Admission Validity Studies use **first-year grade point average** as the default criterion. You have the option of specifying a different criterion in Step 2 and of customizing other aspects of your validity study in Step 3.

*If at any time you have questions about the request process you may e-mail ACES staff for assistance.*

**Contact Information**

(Note: Items marked by an * are required)

Name of institution: * *Please enter this exactly as it is to appear in your final report.*
Institution's College Board code number: * *Institution code look-up: click here (Pop-ups must be enabled to view this link.)*
Last name: *
First name: *
M.I.:
Position/Title:
E-mail address: *
Telephone number: *
Street: *
City: *
State: *
Zip code: *
Department or school:
Secondary contact:

**Design Your Report**

Continue to Step 2 where you can specify your criterion and predictors.

Continue Clear Form



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# Study Design
## Specify Criterion; Specify Predictors – HS measure

### Admission Validity Study Request (continued - 2 of 3)

*If at any time you have questions about the request process you may e-mail ACES staff for assistance.*

(Note: Items marked by an * are required)

**Specify a Criterion***

Select a criterion label

**Specify Predictors**

All ACES Admission Validity Studies use **high school grade point average (GPA) or class rank, SAT Test scores** and **SAT Subject Test scores (optional)** as predictors. Please specify below your particular preferences for how these predictors should be used in your study.

***Specify GPA or Class Rank***

All Admission Validity Studies use either **high school GPA** or **high school class rank** as predictors. Please indicate below which predictor you would prefer. You must also specify if you will be providing this information or if you want to use ACES-supplied data.

| Type of high school data * | Source of data * |
|---|---|
| ○ HSGPA<br>○ HS rank | ○ from data supplied by your institution<br>○ from ACES-supplied data |


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# Specify Predictors - SAT Scores

**Select the SAT Test(s) you wish to analyze as predictors.**

Please indicate the SAT Test score or scores that you would like to be included in your study by choosing **one** of the options below. Next, specify whether you would like to use the highest or most recent score(s). The default choice is Critical Reading, Math, Writing.

**SAT Test:**

| Individual Predictors | Multiple Predictor Sets |
|---|---|
| **Single Scores** | |
| ○ Critical Reading | ◉ Critical Reading, Math, Writing |
| ○ Math | ○ [Critical Reading + Math], Writing |
| ○ Writing | ○ Critical Reading, Writing |
| **Composite Scores (sum of scores)** | ○ Critical Reading, Math |
| ○ [Critical Reading + Math] | ○ Math, Writing |
| ○ [Critical Reading + Writing] | |
| ○ [Math + Writing] | |
| ○ [Critical Reading + Math + Writing] | |

**Specify highest or most recent score(s) ***

○ Use the highest score(s)

○ Use the most recent score(s)


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# Specify Predictors - SAT Subject Tests

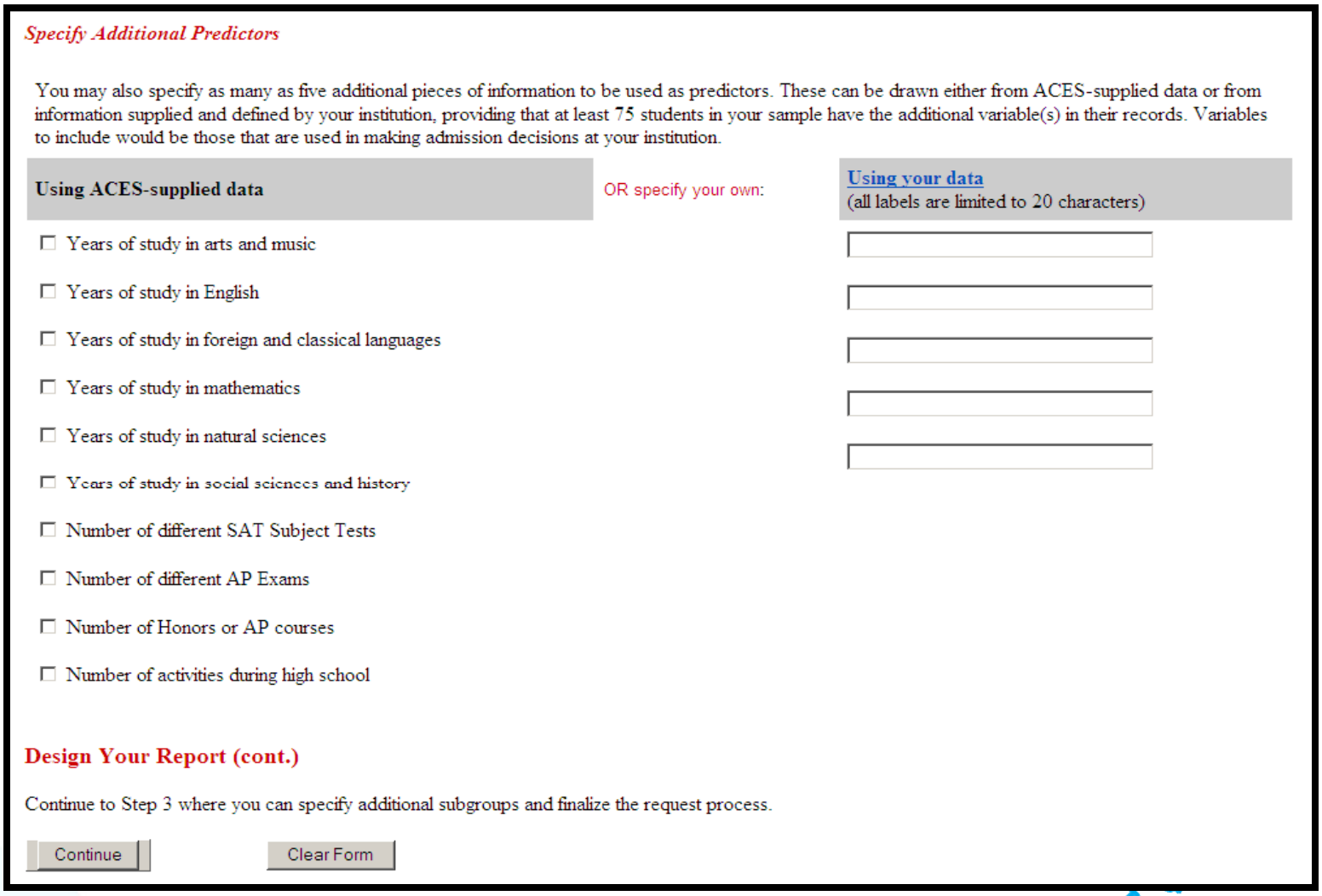
**Select the SAT Subject Tests you wish to analyze as predictors.**

When SAT Subject Test scores are present in a student's record, Admission Validity Studies routinely consider them as a predictor. There are as many as three options for using SAT Subject Test scores within a single study. You may choose to use either scores from a particular SAT Subject Test(s), highest SAT Subject Test scores within a student's record or average SAT Subject Test scores. Your choice should be based on the SAT Subject Test(s) that are used in making admission decisions at your institution.

**SAT Subject Tests:**

| **Using score(s) on specific SAT Subject Test(s)** | | **- OR -** | **Using highest or average SAT Subject Tests** |
|---|---|---|---|
| **Select first SAT Subject Test predictor** | | | **Select first SAT Subject Test predictor** |
| **English**<br>○ Literature<br><br>**History & Social Sciences**<br>○ U. S. History<br>○ World History<br><br>**Mathematics**<br>○ Mathematics Level 1<br>○ Mathematics Level 2<br><br>**Science**<br>○ Biology<br>○ Chemistry<br>○ Physics | **Languages**<br>○ Chinese with Listening<br>○ French<br>○ French with Listening<br>○ German<br>○ German with Listening<br>○ Modern Hebrew<br>○ Italian<br>○ Japanese with Listening<br>○ Korean with Listening<br>○ Latin<br>○ Spanish<br>○ Spanish with Listening | - OR - | ○ Highest Non-Language SAT Subject Test<br>○ Highest of All SAT Subject Tests<br>○ Average of Two Highest Non-Language SAT Subject Tests<br>○ Average of Two Highest SAT Subject Tests |

# Specify Additional Predictors



*Specify Additional Predictors*

You may also specify as many as five additional pieces of information to be used as predictors. These can be drawn either from ACES-supplied data or from information supplied and defined by your institution, providing that at least 75 students in your sample have the additional variable(s) in their records. Variables to include would be those that are used in making admission decisions at your institution.

| **Using ACES-supplied data** | OR specify your own: | **Using your data** (all labels are limited to 20 characters) |
|---|---|---|
| ☐ Years of study in arts and music | | |
| ☐ Years of study in English | | |
| ☐ Years of study in foreign and classical languages | | |
| ☐ Years of study in mathematics | | |
| ☐ Years of study in natural sciences | | |
| ☐ Years of study in social sciences and history | | |
| ☐ Number of different SAT Subject Tests | | |
| ☐ Number of different AP Exams | | |
| ☐ Number of Honors or AP courses | | |
| ☐ Number of activities during high school | | |

**Design Your Report (cont.)**

Continue to Step 3 where you can specify additional subgroups and finalize the request process.

Continue  Clear Form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# Examine Subgroups; Include Coursework

## Admission Validity Study Request (continued - 3 of 3)

*If at any time you have questions about the request process you may e-mail ACES staff for assistance.*

### Specify Additional Subgroups

All ACES studies break down your results on the basis of **gender**, **ethnicity**, and **native language spoken** whenever your sample includes 75 or more students for at least two levels of a subgroup (e.g., 75+ males and 75+ females). You may also specify up to two additional subgroups below, again, using either ACES-supplied data, your own data, or a combination (i.e., one subgroup from each).

| Select Additional Subgroup 1 | Select Additional Subgroup 2 |
|---|---|
| ○ Degree-level goal | ○ Degree-level goal |
| ○ Ability rating in math | ○ Ability rating in math |
| ○ Ability rating in science | ○ Ability rating in science |
| ○ Ability rating in writing | ○ Ability rating in writing |
| ○ Other ( ) | ○ Other ( ) |

Would you like results for all Hispanic ethnic groups to be analyzed and reported together as one group? (**Note**: In order to analyze and report these groups separately, you must have no less than 75 students of one or more of these three Hispanic subgroups: Mexican or Mexican American; Puerto Rican; or Latin American, South American, Central American, or other Hispanic or Latino.)

◉ Yes ○ No

### College Course-Level Data

All participants of the College Board's national SAT Validity Study must submit college course-level data. Studies have shown that correcting for course difficulty produces a more accurate prediction equation for use in admission decisions. Submitting course-level data requires that you provide the following information for each student: for every course taken you will need the course abbreviation (e.g., 'ENG101'), the long name of the course (e.g., 'English Composition I'), the grade received, the number of credits earned, and the semester in which the course was taken.

◉ Will be including college course-level data for analysis

# ACES Data Submission

- Choose from a variety of common formats including:
  - -Excel
  - -Access
  - -SPSS
  - -SAS
  - -ASCII delimited format
- Upload the file directly from a PC to ACES

All ACES data storage and transmission are **secured from end to end**—that is, from the time it leaves the browser being used at the institution until it passes beyond the ETS firewall. (ETS processes ACES studies for the College Board.) A combination of security tools and procedures is used, including Secure Socket Layer (SSL), Pretty Good Privacy (PGP), and ETS proprietary encryption techniques.


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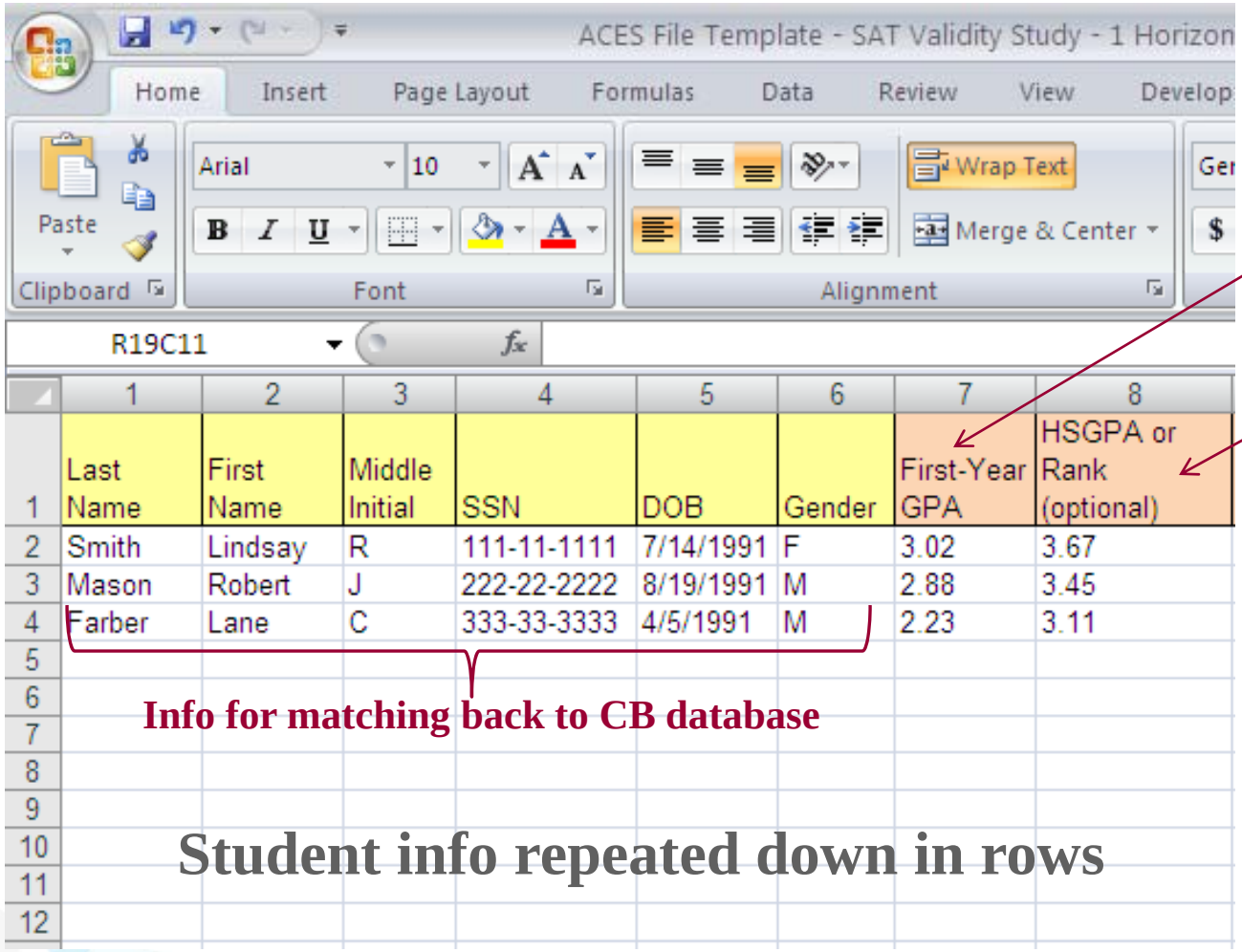
# Basic File for ACES Admission Validity Study




| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 1 | Last Name | First Name | Middle Initial | SSN | DOB | Gender | First-Year GPA | HSGPA or Rank (optional) |
| 2 | Smith | Lindsay | R | 111-11-1111 | 7/14/1991 | F | 3.02 | 3.67 |
| 3 | Mason | Robert | J | 222-22-2222 | 8/19/1991 | M | 2.88 | 3.45 |
| 4 | Farber | Lane | C | 333-33-3333 | 4/5/1991 | M | 2.23 | 3.11 |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |

**Criterion (FYGPA)**

**HS Measure – optional because it can be supplied by the ACES system**

**Info for matching back to CB database**

**Student info repeated down in rows**



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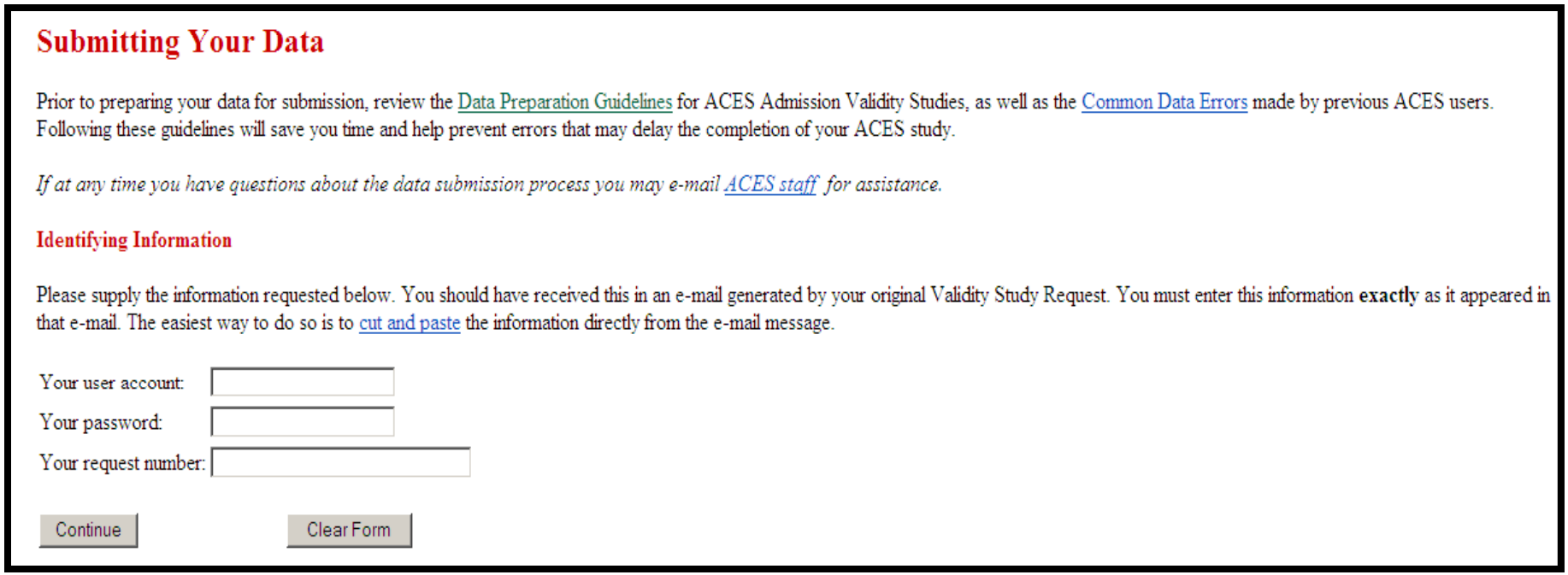
# Submitting the Data File(s) – Login Info



## Submitting Your Data

Prior to preparing your data for submission, review the Data Preparation Guidelines for ACES Admission Validity Studies, as well as the Common Data Errors made by previous ACES users. Following these guidelines will save you time and help prevent errors that may delay the completion of your ACES study.

*If at any time you have questions about the data submission process you may e-mail ACES staff for assistance.*

### Identifying Information

Please supply the information requested below. You should have received this in an e-mail generated by your original Validity Study Request. You must enter this information **exactly** as it appeared in that e-mail. The easiest way to do so is to cut and paste the information directly from the e-mail message.

Your user account:

Your password:

Your request number:

Continue  Clear Form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# Submitting Data (cont.)– Course grades, Number of files

## Submitting Your Data (continued)

*If at any time you have questions about the data submission process you may e-mail ACES staff for assistance.*

**Course Grade Information**

You indicated on your request that you would be submitting college course-level data. Please answer the questions below specifying how you will be submitting these data.

Will grades appear in numeric or letter form?

- (•) letter grades
- ( ) numeric grades

What is the range of possible numeric grades, or numeric equivalents of alphabetic grades, at your school?

Lowest? [ ] Highest? [ ]

What is the maximum number of courses per student for which grades will be submitted?

[- Please Select - ▼]

**Data File Information**

When providing course grade data, you have the option of submitting a single file with all student data or submitting two separate files, one with admission-related data, the other with course grade data. When submitting separate files, certain requirements and restrictions and file formatting rules apply, which you may want to review.

In how many data files (and if two, in what format) will you be submitting data for this study request?

- (•) submitting one file (horizontal format)
- ( ) submitting two files (both in horizontal format)
- ( ) submitting two files (with course grade file in vertical format)

[Continue] [Clear All Values]


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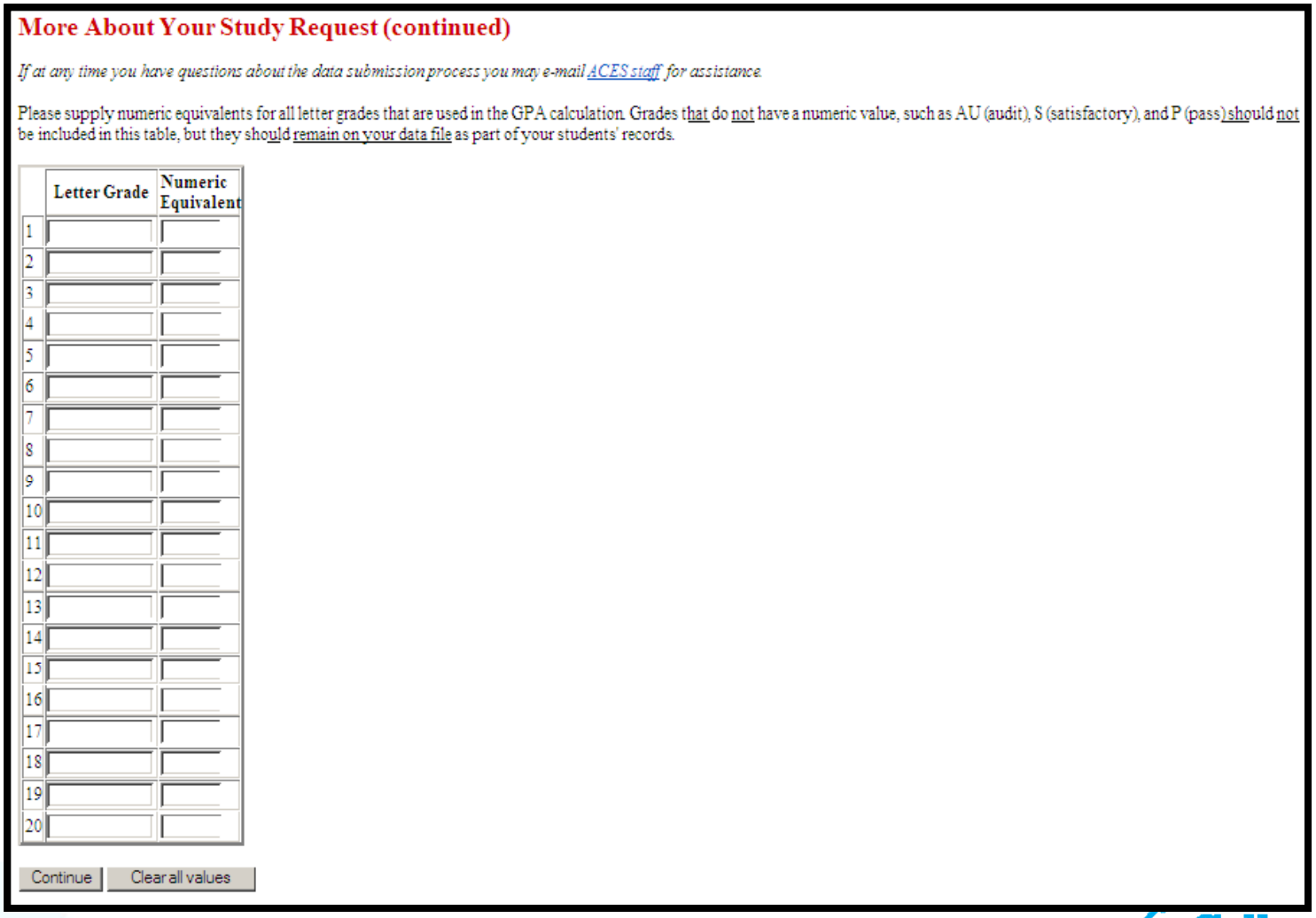
# Submitting Data (cont.) – Grade equivalents



**More About Your Study Request (continued)**

*If at any time you have questions about the data submission process you may e-mail ACES staff for assistance.*

Please supply numeric equivalents for all letter grades that are used in the GPA calculation. Grades that do not have a numeric value, such as AU (audit), S (satisfactory), and P (pass) should not be included in this table, but they should remain on your data file as part of your students' records.

| | Letter Grade | Numeric Equivalent |
|---|---|---|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
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| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |

Continue | Clear all values


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# Submitting Data (cont.) – Labeling Info

## Submitting Your Data (continued)

*If at any time you have questions about the data submission process you may e-mail ACES staff for assistance.*

**About Your Data File**

Please select the year that students represented in your data entered college 2008 (required)

Please indicate what you would like to call the data file you will be submitting. This should be a simple descriptive label, e.g., "Entering Class of Fall 2008."

File label: (required)

Please specify how your student name is formatted: (required)

- In separate fields: first | middle | last (any order; e.g., Public | John | Q ) (recommended)
- In a single field: last, first, middle (e.g., Public, John Q. )
- In a single field: first, middle, last (e.g., John Q. Public )

Specify your file type below: (required)

- Microsoft EXCEL Spreadsheet
- Tab-Delimited ASCII
- Fixed Length ASCII
- Microsoft ACCESS Database
- SPSS Portable File
- Comma-Delimited ASCII (CSV)
- SAS Transport File

Continue | Clear all values


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# Submitting Data (cont.) - variable locations/values

**Delimited (tab, comma) ASCII or XLS (Excel) Layout Table**

| | Label | Excel Column No. or ASCII Var. Position No. | Min.Value | Max.Value |
|---|---|---|---|---|
| First Name * | | | | |
| Middle Name (Optional) | | | | |
| Last Name * | | | | |
| Gender * | | | | |
| Date of Birth * | | | | |
| SSN * | | | | |
| Home ZIP (strongly recommended) | | | | |
| HS Code (strongly recommended) | | | | |
| Criterion * | First-Year GPA | | | |
| Cumulative GPA (if other than First-Year GPA) * | | | | |
| Retention Indicator * | | | | |
| Major area of study (when available) | | | | |
| University-Assigned Student ID (required) * | | | | |
| Add'l Predictor 1 | Matrix | | | |
| Add'l Predictor 2 | Need | | | |
| Add'l Predictor 3 | Filed Fafsa | | | |
| Add'l Predictor 4 | Residency | | | |
| Add'l Predictor 5 | WUE | | | |
| Add'l Subgroup 1 | Ability rating in math | From ACES | | |
| Add'l Subgroup 2 | Ability rating in science | From ACES | | |
| HS Avg.* | | | | |
| Course 1 Label (abbreviation) * | | | | |
| Course 2 Label (abbreviation) * | | | | |


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# Obtaining the ACES Report

- ACES notifies the file submitter via e-mail when the study is completed
- The document is password protected for confidentiality and is encrypted until downloaded at the institution
- In addition to the ACES report, institutions receive an **electronic copy of the student data** with added information on:
  - students' scores for the SAT, SAT Subject Tests, Advanced Placement exam scores
  - demographic information extracted from the ACES database
  - statistics generated during the processing of the study (the predicted FYGPA).


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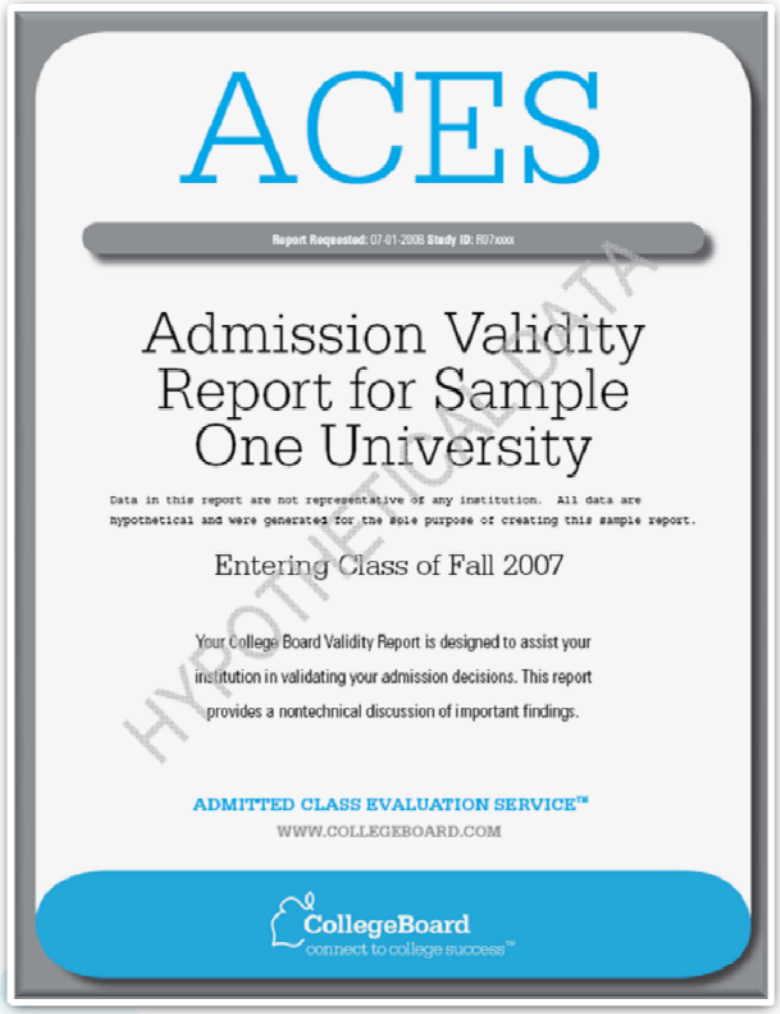
# ACES Admission Validity Report



ACES

Report Requested: 07-01-2008 Study ID: R07xxxx

Admission Validity Report for Sample One University

Data in this report are not representative of any institution. All data are hypothetical and were generated for the sole purpose of creating this sample report.

Entering Class of Fall 2007

Your College Board Validity Report is designed to assist your institution in validating your admission decisions. This report provides a nontechnical discussion of important findings.

ADMITTED CLASS EVALUATION SERVICE™

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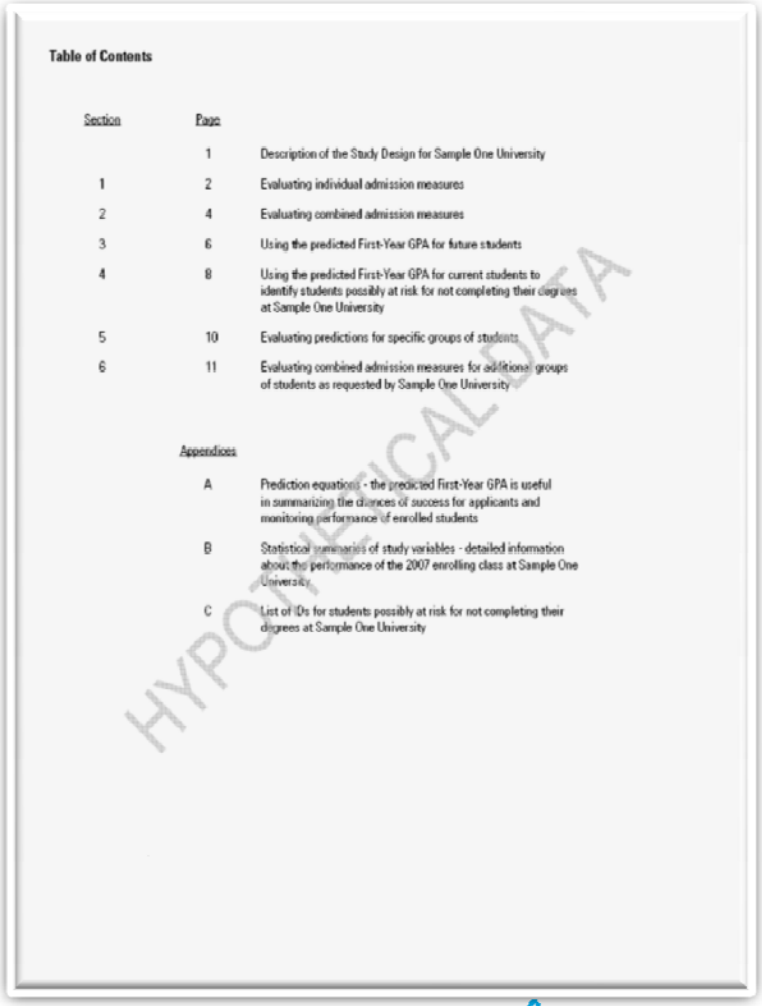
CollegeBoard connect to college success™





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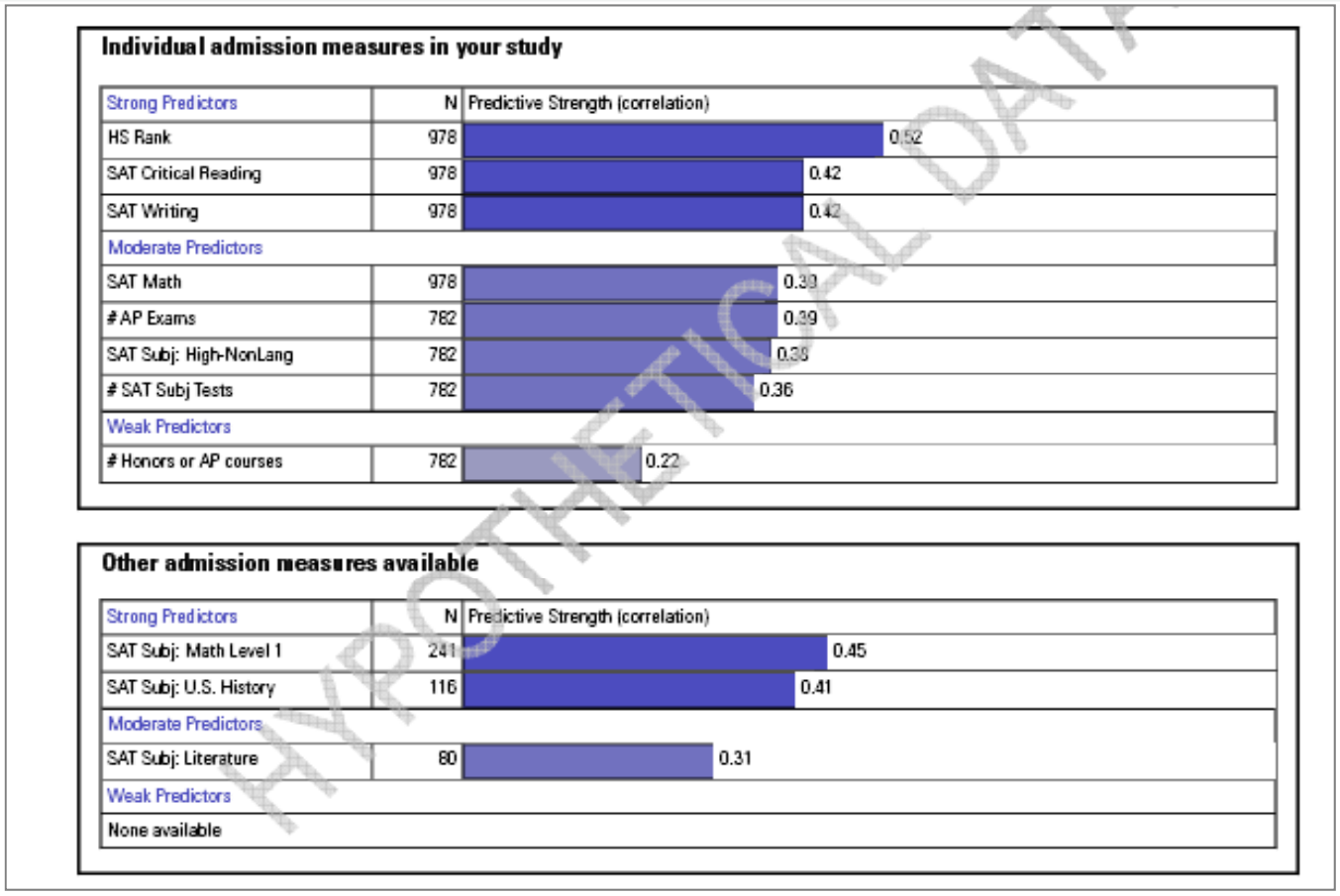
# Section 1: Evaluating individual admission measures



**Individual admission measures in your study**

| Strong Predictors | N | Predictive Strength (correlation) |
|---|---|---|
| HS Rank | 978 | 0.52 |
| SAT Critical Reading | 978 | 0.42 |
| SAT Writing | 978 | 0.42 |
| Moderate Predictors | | |
| SAT Math | 978 | 0.39 |
| # AP Exams | 782 | 0.39 |
| SAT Subj: High-NonLang | 782 | 0.38 |
| # SAT Subj Tests | 782 | 0.36 |
| Weak Predictors | | |
| # Honors or AP courses | 782 | 0.22 |

**Other admission measures available**

| Strong Predictors | N | Predictive Strength (correlation) |
|---|---|---|
| SAT Subj: Math Level 1 | 241 | 0.45 |
| SAT Subj: U.S. History | 116 | 0.41 |
| Moderate Predictors | | |
| SAT Subj: Literature | 80 | 0.31 |
| Weak Predictors | | |
| None available | | |



This section summarizes the predictive strength of the individual admission measures in the study.

The second analysis may include results for predictors, such as SAT Subject Tests, that institutions did not explicitly choose to study but were present in their students' records.

# Section 2: Evaluating combined admission measures

**SAT combinations**

| SAT | | | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | | | | |
| 35 | 31 | 34 | | | 978 | 0.44 |
| 18 | 17 | 20 | 45 | | 978 | 0.57 |
| 17 | 18 | 20 | 44 | 1 | 978 | 0.58 |

**SAT & SAT Subject Test combinations**

| SAT | | | SAT Subject Test: | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | High-NonLang | | | | |
| 23 | 27 | 27 | 23 | | | 782 | 0.53 |
| 17 | 19 | 20 | 12 | 32 | | 782 | 0.60 |
| 18 | 20 | 24 | 11 | 26 | 1 | 782 | 0.61 |



This section combines the admission measures that were evaluated individually in Section 1 of the report to find the best prediction of success.

These tables display the corrected multiple correlations between combinations of admission measures and the criterion. The bars at the right of each table represent this predictive strength (multiple correlation) for each combination.

# Section 3: Using predicted First-Year GPA for future students

| Percent of students expected to earn a First-Year GPA of at least: | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Targeted First-Year GPA | | | | | |
| | | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 |
| Predicted First-Year GPA | 2.0 | 94 | 50 | 5 | | | |
| | 2.1 | 97 | 62 | 10 | | | |
| | 2.2 | 98 | 73 | 17 | | | |
| | 2.3 | 99 | 82 | 26 | 1 | | |
| | 2.4 | 99 | 89 | 37 | 2 | | |
| | 2.5 | 99 | 94 | 50 | 5 | | |
| | 2.6 | 99 | 97 | 62 | 10 | | |
| | 2.7 | 99 | 98 | 73 | 17 | | |
| | 2.8 | 99 | 99 | 82 | 26 | 1 | |
| | 2.9 | 99 | 99 | 89 | 37 | 2 | |
| | 3.0 | 99 | 99 | 94 | 50 | 5 | |
| | 3.1 | 99 | 99 | 97 | 62 | 10 | |
| | 3.2 | 99 | 99 | 98 | 73 | 17 | |
| | 3.3 | 99 | 99 | 99 | 82 | 26 | 1 |
| | 3.4 | 99 | 99 | 99 | 89 | 37 | 2 |
| | 3.5 | 100 | 99 | 99 | 94 | 50 | 5 |
| | 3.6 | 100 | 99 | 99 | 97 | 62 | 10 |
| | 3.7 | 100 | 99 | 99 | 98 | 73 | 17 |
| | 3.8 | 100 | 99 | 99 | 99 | 82 | 26 |
| | 3.9 | 100 | 99 | 99 | 99 | 89 | 37 |
| | 4.0 | 100 | 100 | 99 | 99 | 94 | 50 |



This table can be used to estimate the likelihood that a student with a particular predicted First-Year GPA will earn a given First-Year GPA.

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# Section 4: Using the predicted First-Year GPA for current students to identify students possibly at risk for not completing their degrees at Sample One University

Some students earned a First-Year GPA lower than that predicted by their preadmission credentials. Research has shown that these students are at a higher risk for not completing their degrees. This information can be used to identify students who are possibly at risk for leaving Sample One University prior to graduation.

Summary of Performance

| Number who performed higher than predicted | Number who performed as well as predicted | Number who performed lower than predicted | Total number of students | Percent who performed lower than predicted |
|---|---|---|---|---|
| 372 | 498 | 108 | 978 | 11.0% |

- 108 students, 11.0% of the sample, performed substantially below their predicted First-Year GPA.
- Because these students may be more likely to drop out and may benefit from additional counseling, their student IDs are listed individually in Appendix C.
- Based upon the standard deviation of the predicted First-Year GPA for the entire sample, students whose actual First-Year GPA was one or more standard deviation(s) above the predicted value are considered to be performing higher than expected. Students whose actual First-Year GPA was one and one-half or more standard deviations below that predicted value are considered to be performing lower than expected, and the rest are considered to be performing as well as expected.

Some students earned an FYGPA lower than that predicted by their preadmission credentials. Research has shown that these students are at a higher risk for not completing their degrees. This information can be used to identify students who are possibly at risk for leaving Sample One University prior to graduation.

# Section 5: Evaluating predictions for specific groups of students

Equations computed for all students may not accurately reflect the performance for some subgroups of students who attend your institution. For this reason, ACES compares predicted First-Year GPA with actual First-Year GPA to check for significant differences and identifies the groups of students whose actual performance in college is higher or lower than predicted. There are many possible reasons for the differences in performance between groups, and there is no agreed-upon remedy.

**First-Year GPA for Specific Groupings of Students**

| Category | Groups | Number of Students | Average First-Year GPA | | |
|---|---|---|---|---|---|
| | | | Predicted | Actual | Difference |
| Gender | | | | | |
| | Males | 450 | 2.88 | 2.80 | 0.08 |
| | Females | 528 | 2.97 | 3.02 | -0.05 |
| Residency | | | | | |
| | Out-of-State | 428 | 2.94 | 2.90 | 0.04 |
| | In-State | 550 | 2.93 | 2.99 | -0.06 |



- This table shows over- and under-prediction by subgroup.

# Section 6: Evaluating combined admission measures for additional groups of students as requested by Sample One University

Residency — Out-of-State

**SAT combinations**

| SAT | | | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | | | | |
| 31 | 21 | 48 | | | 428 | 0.58 |
| 19 | 18 | 19 | 45 | | 428 | 0.75 |
| 19 | 18 | 19 | 44 | 1 | 428 | 0.76 |

**SAT & SAT Subject Test combinations**

| SAT | | | SAT Subject Test: | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | High-NonLang | | | | |
| 21 | 28 | 27 | 24 | | | 332 | 0.60 |
| 17 | 21 | 20 | 21 | 21 | | 332 | 0.75 |
| 18 | 18 | 23 | 11 | 28 | 2 | 332 | 0.76 |

Residency — In-State

**SAT combinations**

| SAT | | | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | | | | |
| 20 | 51 | 29 | | | 550 | 0.60 |
| 22 | 20 | 23 | 35 | | 550 | 0.83 |
| 20 | 21 | 17 | 36 | 6 | 550 | 0.85 |

**SAT & SAT Subject Test combinations**

| SAT | | | SAT Subject Test: | HS Rank | Add. Predictors | N | Predictive Strength (multiple correlation) |
|---|---|---|---|---|---|---|---|
| Critical Reading | Math | Writing | High-NonLang | | | | |
| 20 | 28 | 29 | 23 | | | 450 | 0.61 |
| 18 | 20 | 18 | 21 | 23 | | 450 | 0.87 |
| 18 | 18 | 25 | 14 | 24 | 1 | 450 | 0.87 |



This section includes the corrected multiple correlations for different subgroups examined in the study.

# Appendix A: Prediction equations

## Several equations are given so that institutions are provided with the information needed to choose the best combination of predictors for each student.

### Appendix A: Prediction equations

The numbers in the table(s) in this section describe the prediction equations developed for Sample
represents: 1) a model with a different set of predictors used to formulate an equation for use in p
potential students whose records contain the variables chosen for this study, and 2) the correspon
these predictors.

The first four rows of the table show:

- The number of student records used in that analysis
- The resulting multiple correlation
- The multiple correlation adjusted for the restriction in the range of scores for this group of studen
- The standard error of the prediction equation

The remaining rows in each column display the raw regression weights to be applied to known predic
predicting First-Year GPA.

Your decision on which equation to use is based on the information available in each student's record
institution or state. For example, if a student has an SAT Critical Reading score of 550, an SAT Math so
Writing score of 550, and supplies no other information, the appropriate prediction equation (using data

*Predicted First-Year GPA = Constant + (SAT CR score × SAT CR weight) + (SAT M score ×*
*(SAT W score × SAT W weight)*

*Predicted First-Year GPA = 1.405640 + (550 × 0.001250) + (590 × 0.000520) + (550 × 0.00*

When using a student's rank in class in your prediction equation, you must first convert that rank to the sa
process your study. The formula to do this is:

*(100 × (1 minus the student's numerical rank divided by the number of students in the class)).*

For example, if a student's rank in class is 20th out of a class of 74 students you would use the formula to d
in the prediction equation.

*High School Rank = (100 × [1 - (20 ÷ 74)]) = 73*

ACES creates prediction equations when there are 75 or more students within a group.

All Students

| | SAT Model | SAT & HS Model | SAT, HS, & Add. Predictors Model | SAT Subject Test Model | SAT Subject Test & HS Model | SAT Subject Test, HS, & Add. Predictors Model |
|---|---|---|---|---|---|---|
| N | 978 | 978 | 978 | 782 | 782 | 782 |
| Multiple Correlation | 0.25 | 0.46 | 0.46 | 0.35 | 0.42 | 0.42 |
| Corrected Correlation | 0.44 | 0.57 | 0.58 | 0.53 | 0.60 | 0.61 |
| Standard Error | 0.03 | 0.02 | 0.02 | 0.02 | 0.03 | 0.03 |
| Constant | 1.405640 | 0.782125 | 0.354262 | 0.251805 | 0.652542 | 0.352520 |
| SAT Critical Reading | 0.001250 | 0.001210 | 0.001425 | 0.001150 | 0.001132 | 0.001059 |
| SAT Math | 0.000520 | 0.000620 | 0.001340 | 0.001220 | 0.001122 | 0.001104 |
| SAT Writing | 0.000750 | 0.001340 | 0.001673 | 0.001340 | 0.001197 | 0.001365 |
| HS Rank | | 0.002890 | 0.002450 | | 0.002140 | 0.002220 |
| SAT Subj: High-NonLang | | | | 0.000132 | 0.000571 | 0.001008 |
| # Honors or AP courses | | | 0.000000 | | | 0.000040 |
| # AP Exams | | | 0.000080 | | | 0.000000 |
| # SAT Subj Tests | | | 0.000307 | | | 0.000002 |

- SAT and SAT Subject Test scores are on a 200-800 scale.
- Each column represents: 1) a model with a different set of predictors used to formulate an equation for use in predicting First-Year GPA for potential students whose records contain the variables chosen for this study, and 2) the corresponding sample of students with these predictors.



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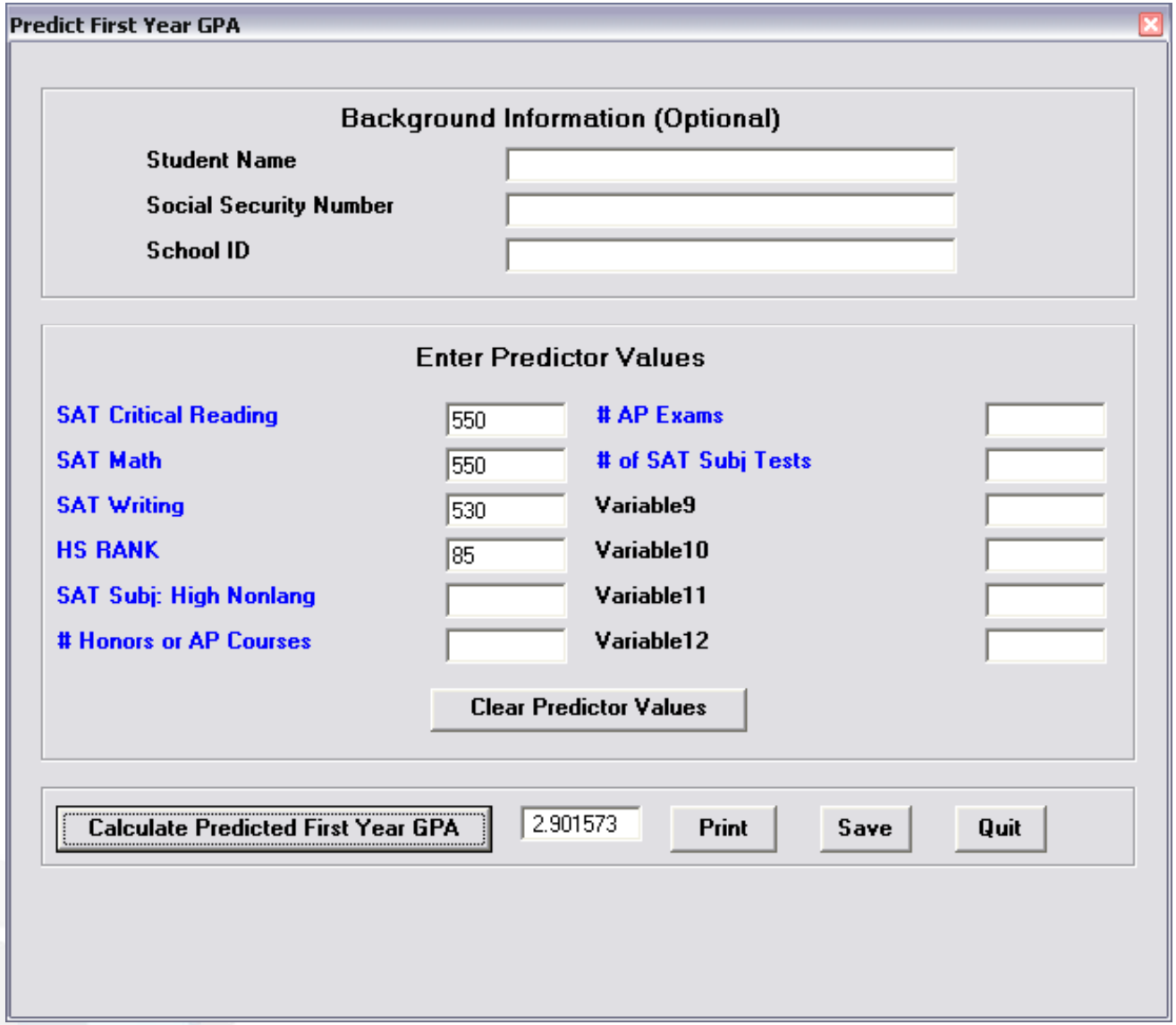
# Using the prediction equations in Appendix A…

- First obtain a Predicted First Year GPA
  - Example SAT CR, SAT M, SAT W, HS Rank
    - 550,550,530,85  yields PFYA = 2.90
  - Find row with PFYA of 2.90
    - We can see that 89% of the students with a PFYA of 2.90 are expected to earn 2.5 or greater.
  - Using the PPC  (Predicted Performance Calculator)

# Predicted Performance Calculator




Tool delivered with each ACES admission validity study – specific to your institution.

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# Circling back to the probability table from Section 3

**Percent of students expected to earn a First-Year GPA of at least:**

| Predicted First-Year GPA | Targeted First-Year GPA: 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 |
|---|---|---|---|---|---|---|
| 2.0 | 94 | 50 | 5 | | | |
| 2.1 | 97 | 62 | 10 | | | |
| 2.2 | 98 | 73 | 17 | | | |
| 2.3 | 99 | 82 | 26 | 1 | | |
| 2.4 | 99 | 89 | 37 | 2 | | |
| 2.5 | 99 | 94 | 50 | 5 | | |
| 2.6 | 99 | 97 | 62 | 10 | | |
| 2.7 | 99 | 98 | 73 | 17 | | |
| 2.8 | 99 | 99 | 82 | 26 | 1 | |
| 2.9 | 99 | 99 | 89 | 37 | 2 | |
| 3.0 | 99 | 99 | 94 | 50 | 5 | |
| 3.1 | 99 | 99 | 97 | 62 | 10 | |
| 3.2 | 99 | 99 | 98 | 73 | 17 | |
| 3.3 | 99 | 99 | 99 | 82 | 26 | 1 |
| 3.4 | 99 | 99 | 99 | 89 | 37 | 2 |
| 3.5 | 100 | 99 | 99 | 94 | 50 | 5 |
| 3.6 | 100 | 99 | 99 | 97 | 62 | 10 |
| 3.7 | 100 | 99 | 99 | 98 | 73 | 17 |
| 3.8 | 100 | 99 | 99 | 99 | 82 | 26 |
| 3.9 | 100 | 99 | 99 | 99 | 89 | 37 |
| 4.0 | 100 | 100 | 99 | 99 | 94 | 50 |



You can see that this student has an 89% probability of achieving a 2.5 or higher in his/her first year of college

# Appendix B: Statistical summaries of study variables

**Appendix B: Statistical summaries of study variables**

| Average Scores By Gender | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | | | Male | | | Female | | |
| | N | Mean | SD | N | Mean | SD | N | Mean | SD |
| First-Year GPA | 978 | 2.93 | 0.63 | 450 | 2.80 | 0.66 | 528 | 3.02 | 0.60 |
| SAT Critical Reading | 978 | 568 | 75 | 450 | 576 | 74 | 528 | 562 | 74 |
| SAT Math | 978 | 572 | 76 | 450 | 595 | 75 | 528 | 556 | 73 |
| SAT Writing | 978 | 593 | 81 | 450 | 586 | 78 | 528 | 598 | 83 |
| HS Rank | 978 | 76.99 | 15.35 | 450 | 72.37 | 15.73 | 528 | 80.18 | 14.23 |
| SAT Subj: High-NonLang | 782 | 541 | 70 | 300 | 531 | 74 | 482 | 553 | 65 |
| # Honors or AP courses | 782 | 1.48 | 1.89 | 300 | 1.30 | 1.87 | 482 | 1.60 | 1.90 |
| # AP Exams | 782 | 0.96 | 1.33 | 300 | 0.86 | 1.24 | 482 | 1.03 | 1.39 |
| # SAT Subj Tests | 782 | 0.97 | 1.43 | 300 | 0.91 | 1.43 | 482 | 1.01 | 1.44 |
| SAT Subj: U.S. History | 116 | 563 | 91 | | | | | | |
| SAT Subj: Literature | 80 | 609 | 81 | | | | | | |
| SAT Subj: Math Level 1 | 241 | 575 | 72 | 93 | 593 | 71 | 148 | 563 | 70 |

| Correlations between Predictors and First-Year GPA | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | | | Male | | | Female | | |
| | N | R | R(adj) | N | R | R(adj) | N | R | R(adj) |
| SAT Critical Reading | 978 | 0.24 | 0.42 | 450 | 0.15 | 0.33 | 528 | 0.34 | 0.54 |
| SAT Math | 978 | 0.18 | 0.39 | 450 | 0.13 | 0.33 | 528 | 0.32 | 0.53 |
| SAT Writing | 978 | 0.27 | 0.42 | 450 | 0.10 | 0.26 | 528 | 0.37 | 0.53 |
| HS Rank | 978 | 0.41 | 0.52 | 450 | 0.40 | 0.49 | 528 | 0.38 | 0.53 |
| SAT Subj: High-NonLang | 782 | 0.30 | 0.40 | 300 | 0.18 | 0.35 | 482 | 0.30 | 0.55 |
| # Honors or AP courses | 782 | 0.10 | 0.22 | 300 | 0.07 | 0.19 | 482 | 0.10 | 0.25 |
| # AP Exams | 782 | 0.25 | 0.39 | 300 | 0.26 | 0.38 | 482 | 0.24 | 0.42 |
| # SAT Subj Tests | 782 | 0.20 | 0.36 | 300 | 0.20 | 0.32 | 482 | 0.19 | 0.40 |
| SAT Subj: U.S. History | 116 | 0.21 | 0.41 | | | | | | |
| SAT Subj: Literature | 80 | 0.14 | 0.31 | | | | | | |
| SAT Subj: Math Level 1 | 241 | 0.30 | 0.45 | 93 | 0.23 | 0.39 | 148 | 0.40 | 0.55 |



This appendix includes summary statistics and adjusted (for range restriction) and unadjusted correlations for predictors and criterion by total group and gender.

# Appendix C: List of IDs for students possibly at risk for not completing their degrees at Sample One University

To help you target retention efforts at Sample One University, ACES has listed those students whose actual academic performance fell one and one-half or more standard deviations below their predicted First-Year GPA. The standard deviation of the predicted First-Year GPA for all students in the study was used to identify these at-risk students.

Notes:

- These differences are based on the equations developed for all students and do not reflect any analyses for specific demographic groups.
- Students who earned a First-Year GPA of less than 2.0 are not shown in Appendix C, as these students are readily identified as being at academic risk.
- You did not submit course grades, so First-Year GPA is unadjusted for course-to-course differences in grading standards at Sample One University.

| Student ID | First-Year GPA | | | Gender | R/E | EBL |
|---|---|---|---|---|---|---|
| | Predicted | Actual | Difference | | | |
| xxx-xx-xxxx | 3.30 | 2.02 | -1.28 | M | W | Y |
| xxx-xx-xxxx | 3.24 | 2.15 | -1.09 | F | W | Y |
| xxx-xx-xxxx | 3.12 | 2.03 | -1.09 | F | W | Y |
| xxx-xx-xxxx | 3.08 | 2.00 | -1.08 | F | W | Y |
| xxx-xx-xxxx | 3.10 | 2.04 | -1.06 | F | | Y |
| xxx-xx-xxxx | 3.06 | 2.06 | -1.00 | M | W | Y |
| xxx-xx-xxxx | 3.33 | 2.33 | -1.00 | F | W | Y |
| xxx-xx-xxxx | 3.40 | 2.43 | -0.97 | F | W | Y |
| xxx-xx-xxxx | 2.98 | 2.02 | -0.96 | F | W | Y |
| xxx-xx-xxxx | 3.02 | 2.06 | -0.96 | F | W | Y |
| xxx-xx-xxxx | 2.99 | 2.07 | -0.92 | M | B | Y |
| xxx-xx-xxxx | 3.02 | 2.13 | -0.89 | F | | Y |
| xxx-xx-xxxx | 3.47 | 2.59 | -0.88 | M | W | Y |
| xxx-xx-xxxx | 3.02 | 2.18 | -0.84 | F | W | Y |
| xxx-xx-xxxx | 2.83 | 2.00 | -0.83 | F | W | Y |
| xxx-xx-xxxx | 3.25 | 2.44 | -0.81 | F | W | Y |
| xxx-xx-xxxx | 3.19 | 2.38 | -0.81 | M | W | Y |
| xxx-xx-xxxx | 2.94 | 2.15 | -0.79 | F | W | Y |
| xxx-xx-xxxx | 3.13 | 2.35 | -0.78 | F | W | Y |
| xxx-xx-xxxx | 3.19 | 2.43 | -0.76 | F | W | Y |
| xxx-xx-xxxx | 3.01 | 2.26 | -0.75 | F | W | Y |
| xxx-xx-xxxx | 2.89 | 2.15 | -0.74 | M | | |
| xxx-xx-xxxx | 2.89 | 2.17 | -0.72 | M | W | Y |
| xxx-xx-xxxx | 3.28 | 2.57 | -0.71 | F | | |
| xxx-xx-xxxx | 2.99 | 2.29 | -0.70 | M | W | Y |
| xxx-xx-xxxx | 3.05 | 2.35 | -0.70 | M | W | Y |
| xxx-xx-xxxx | 3.08 | 2.42 | -0.66 | F | W | Y |



This appendix helps institutions to target retention efforts. A list of IDs for students possibly at risk for dropping out or transferring is provided here based on when students' actual academic performance fell one and one-half or more standard deviations below their predicted First-Year GPA.

Students with a FYGPA of less than 2.0 are not shown as these students are readily identified as being at academic risk

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# Section IV

## ACES Placement Validity Studies

# Placement Validity Studies

- You can also use ACES to conduct a predictive placement validity study using scores from:
  - SAT– Critical Reading, Writing, and Math
  - SAT Subject Tests
  - ACCUPLACER

  to predict success in a college course.

  *Answering questions like, "What is the appropriate cut score on SAT Math to place students into Math 101 versus remedial Math 100 at my institution?"*

# Requesting a Placement Study

5

- You may analyze up to five separate courses in your placement validity study.

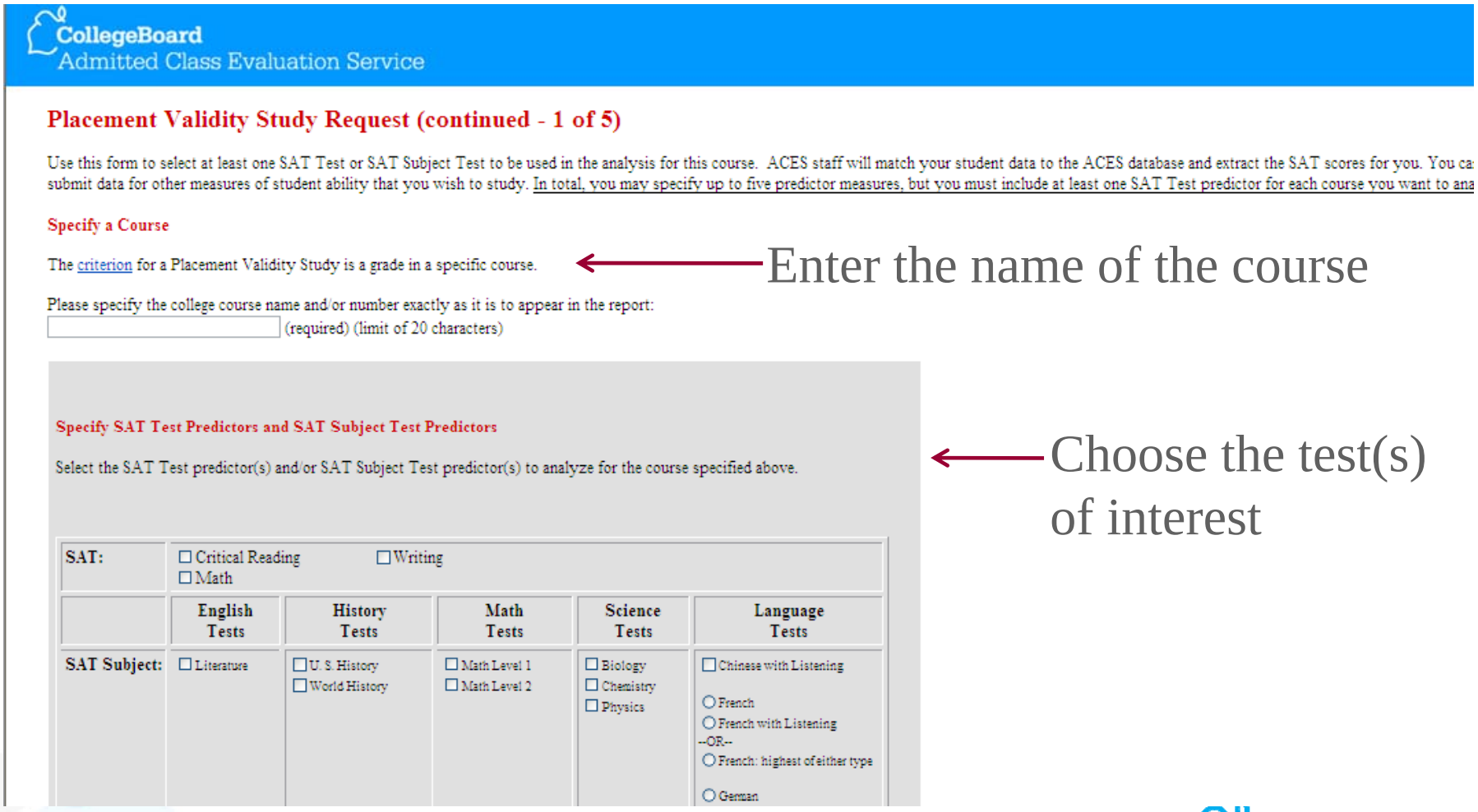
30

- There must be at least 30 student records for a placement validity study to run (or more, depending on the number of predictors used and the type of placement study requested).

# Requesting a Placement Study (cont.)

- You do not have to submit an additional data file for a placement study *if* you have submitted a comprehensive file for an admission validity study.
- For each course, you will begin by specifying the tests and the predictors you are most interested in evaluating.
  - You may use a single predictor, or up to five predictors, for a single course.

# Screenshots from an ACES SAT Placement Study Request:



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Admitted Class Evaluation Service

**Placement Validity Study Request (continued - 1 of 5)**

Use this form to select at least one SAT Test or SAT Subject Test to be used in the analysis for this course. ACES staff will match your student data to the ACES database and extract the SAT scores for you. You ca
submit data for other measures of student ability that you wish to study. In total, you may specify up to five predictor measures, but you must include at least one SAT Test predictor for each course you want to ana

**Specify a Course**

The criterion for a Placement Validity Study is a grade in a specific course.

Please specify the college course name and/or number exactly as it is to appear in the report:
(required) (limit of 20 characters)

**Specify SAT Test Predictors and SAT Subject Test Predictors**

Select the SAT Test predictor(s) and/or SAT Subject Test predictor(s) to analyze for the course specified above.

| | | | | | |
|---|---|---|---|---|---|
| **SAT:** | ☐ Critical Reading ☐ Writing ☐ Math | | | | |
| | **English Tests** | **History Tests** | **Math Tests** | **Science Tests** | **Language Tests** |
| **SAT Subject:** | ☐ Literature | ☐ U. S. History ☐ World History | ☐ Math Level 1 ☐ Math Level 2 | ☐ Biology ☐ Chemistry ☐ Physics | ☐ Chinese with Listening ○ French ○ French with Listening --OR-- ○ French: highest of either type ○ German |

Enter the name of the course

Choose the test(s) of interest



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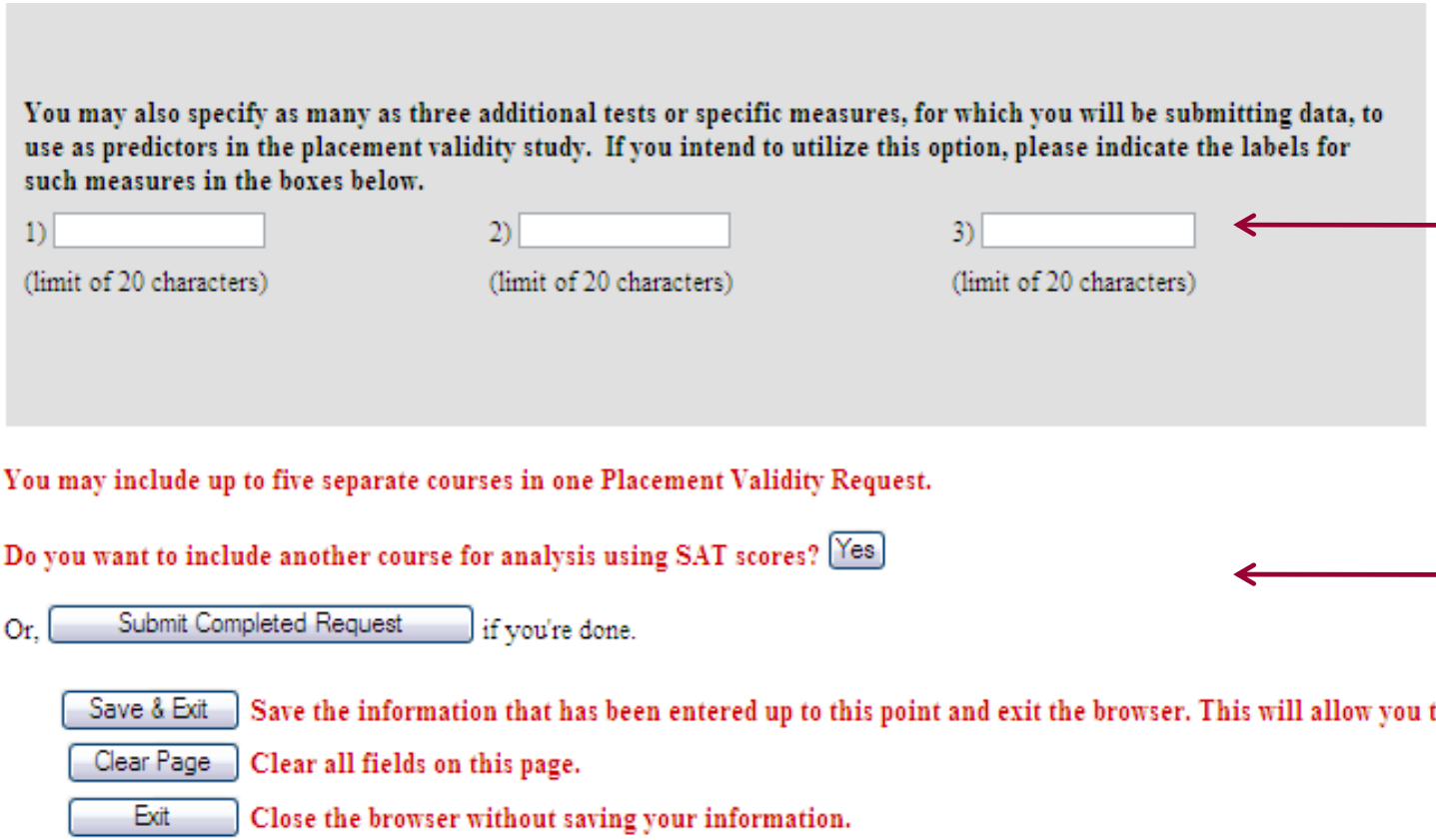
# Screenshots from an ACES SAT Placement Study Request:




Any additional predictors?

Additional courses you would like to analyze?



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# ACES Placement Validity Report

- The predictive validity study provides two probability tables for cut scores, among other information:
  - For a course grade of B or higher
  - For a course grade of C or higher

# Example of ACES Placement Chart

Cut Scores Associated with Predicted Probability of Success Criterion: Final Course Grade of C or Higher in Eng100 Using SAT Scores

**Cut Scores Associated with Predicted Probability of Success Criterion: Final Course Grade of C or Higher in Eng100 Using SAT Scores**

| Probability of Success | SAT Critical Reading Only | SAT Writing Only | Composite Predictor |
|---|---|---|---|
| 0.95 | | | 2.94 |
| 0.90 | 791 | | 2.20 |
| 0.85 | 692 | 750 | 1.73 |
| 0.80 | 621 | 649 | 1.39 |
| 0.75 | 556 | 570 | 1.10 |
| 0.70 | 492 | 512 | 0.85 |
| 0.65 | 443 | 476 | 0.62 |
| 0.60 | 390 | 416 | 0.41 |
| 0.55 | 345 | 370 | 0.20 |
| 0.50 | 300 | 327 | 0.00 |
| 0.45 | 256 | 268 | -0.20 |
| 0.40 | 211 | 227 | -0.41 |
| 0.35 | | | -0.62 |
| 0.30 | | | -0.85 |
| 0.25 | | | -1.10 |
| 0.20 | | | -1.39 |
| 0.15 | | | -1.73 |
| 0.10 | | | -2.20 |
| 0.05 | | | -2.94 |

The following model(s) can be used to calculate the composite predictor shown in the table above.

Model Number 1 = -4.23677 + ( 0.00565) × SAT Critical Reading + ( 0.00625) × SAT Writing



Here you can see that an SAT CR score of 556, for example, is associated with a 75% probability of obtaining a C or Higher in ENG 100

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# Chart with Correlations and % Correctly Placed

- Individual predictors examined (SAT CR alone, SAT W alone)
- Composite predictor

**Logistic Biserial Correlations* of Predictors with Success on the Criterion**
**Criterion: Final Course Grade of C or Higher in Eng100**
**Using SAT Scores**

| Predictor Variable(s) | Study Sample | | | Complete Data Sample | | |
|---|---|---|---|---|---|---|
| | N | Logistic Biserial Correlation* | % Correctly Placed | N | Logistic Biserial Correlation* | % Correctly Placed |
| Individual Predictors | | | | | | |
| SAT Critical Reading | 492 | 0.18 | 69 | 492 | 0.18 | 69 |
| SAT Writing | 492 | 0.29 | 70 | 492 | 0.29 | 70 |
| Composite Predictors | | | | | | |
| Model Number 1 | 492 | 0.47 | 68 | 492 | 0.47 | 68 |
| Model Number 1 includes SAT Critical Reading and SAT Writing | | | | | | |

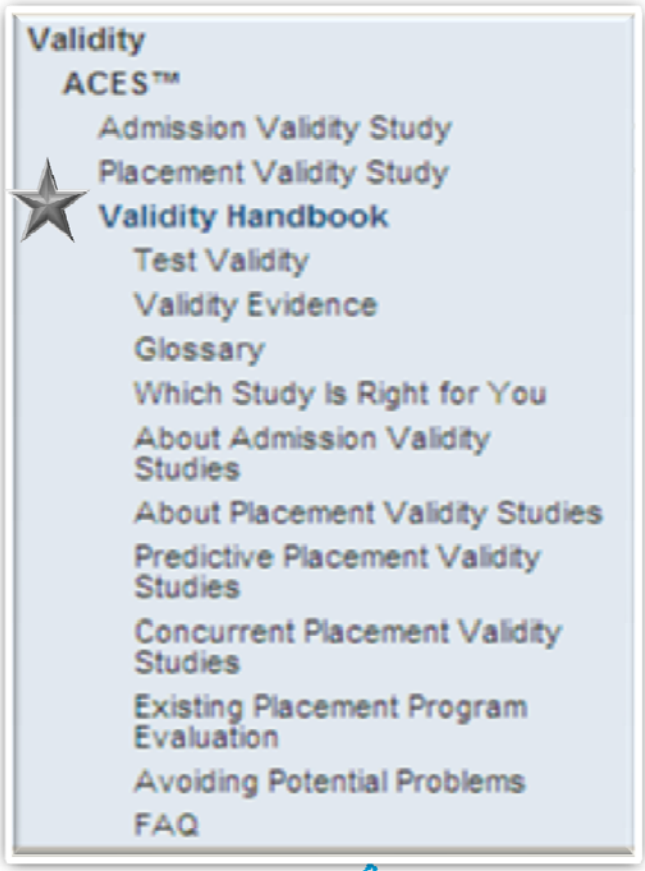
*The logistic biserial correlation is a measure of the strength of association. It is related to a biserial correlation, but has been modified to be consistent with logistic regression and adapted to single and multiple predictors.

# ACES Validity Handbook

**(http://professionals.collegeboard.com/higher-ed/validity/aces/handbook)**

- It is designed to serve as a general reference for validity and includes information about validity beyond what is specifically applicable to ACES.

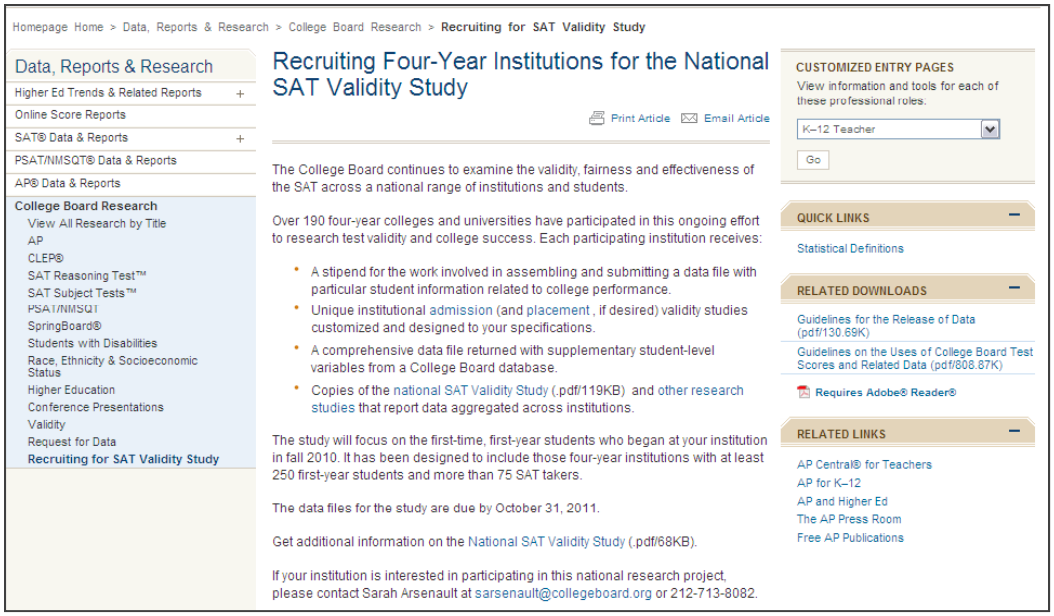
- It includes specific information about the types of validity studies and their design that are available through the ACES system and helps interpret ACES study results.



# Section V

## The National SAT Validity Study

http://professionals.collegeboard.com/data-reports-research/cb/recruiting



# National SAT Validity Study

Responsible test developers and publishers must be able to demonstrate that it is possible to use the sample of behaviors measured by a test to make valid inferences about an examinee's ability to perform tasks that represent the larger domain of interest. (e.g. SAT predicts FYGPA)

We conduct:

- Cross-institutional, longitudinal validity and higher education research to inform ways to ensure that students are ready for and successful in college.
- Data supplied by four-year institutions from around the U.S. and matched to College Board data.

# National SAT Validity Study (cont.)

- The ACES system is used to generate institutional validity reports while College Board researchers aggregate data files from institutions (with at least 250 first year, first time students) to provide national, comprehensive validity studies – available at www.collegeboard.com/research

- Each participating institution receives:
  - a unique ACES admission validity study
  - a comprehensive data file returned with supplementary student-level variables from a College Board database
  - a stipend for their work to create the data file
  - opportunities to learn about results before general public

# Variables for National SAT Validity Study ACES Studies (deadline of 10/31/11)

**First-Year Data on Fall 2010 Cohort** (first-time, first-year students that began at your institution in fall 2010)

- Name
- Social security number
- Date of birth
- Gender
- University-assigned student ID
- Retention to the second year ("yes" or "no")
- First-year GPA
- Grades in first-year courses
- Course abbreviations for first-year courses (e.g., ENG 101)
- Course long names for first-year courses (e.g., Introductory English)
- Credit hours attempted for each course
- Semester each course was taken
- High School GPA (can be supplied by the ACES system or your institution)

# SAT Validity Study results - snapshot

- Admission Validity Study

SAMPLE (2008 entering cohort)

129 colleges participating in Validity Study (N = 246,652)

- Schools provided first year performance data for Fall 2008 cohort through the Admitted Class Evaluation Service™ (ACES ™) portal

Restrict sample to students who completed the new SAT, submitted self reported HSGPA, and had a valid FYGPA (N= 173,963)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# Admission Validity Results (1 of 2)

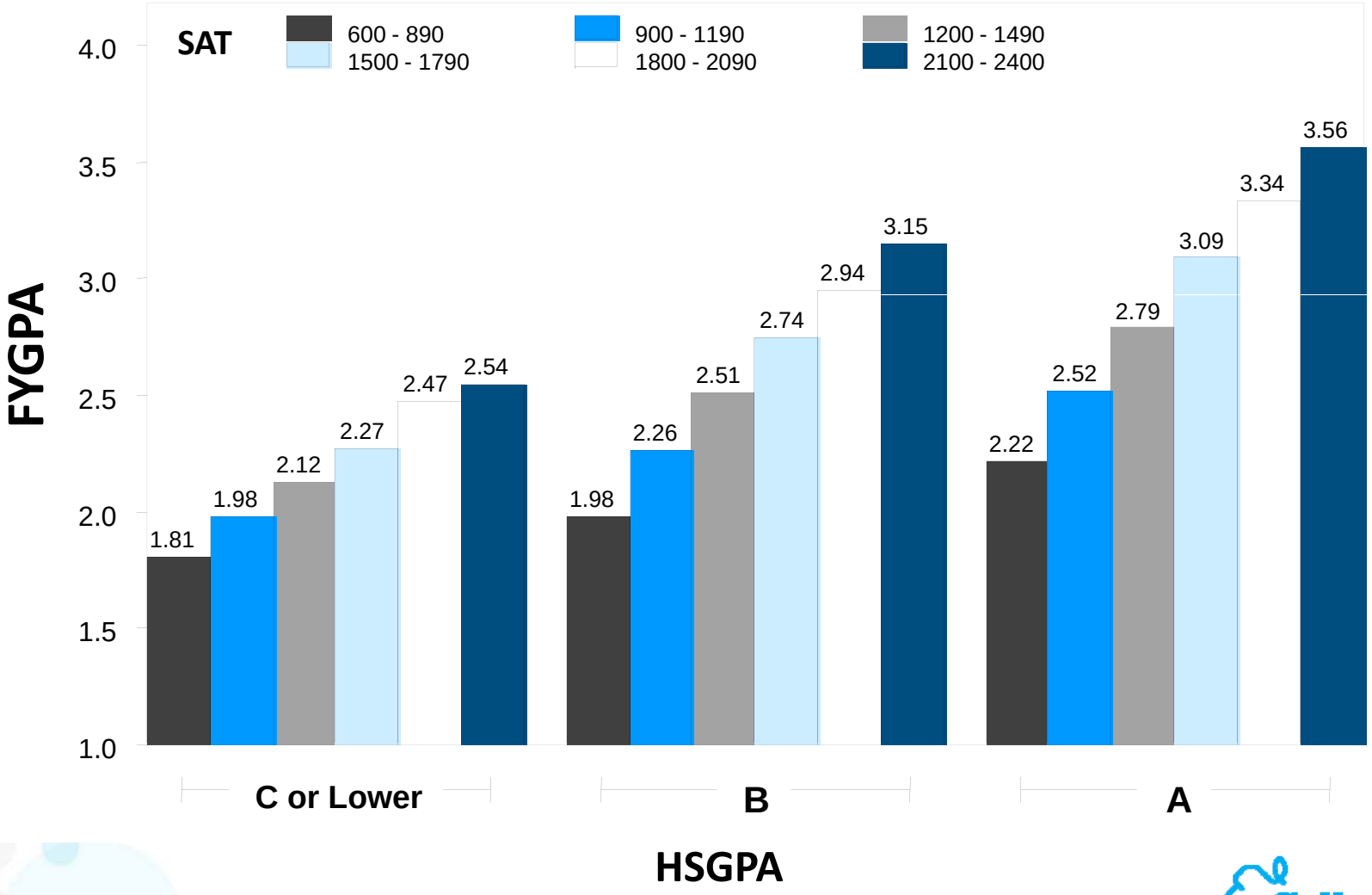
- SAT Writing has the highest correlation with FYGPA among the three individual SAT sections (*Adj. r* = 0.52).
  - SAT CR (*Adj. r* = 0.48); SAT M (*Adj. r* = 0.48)

- As expected, the best combination of predictors of FYGPA is HSGPA and SAT scores (Adj. *r* =0.63), reinforcing the recommendation that colleges use both HSGPA and SAT scores to make the best predictions of student success.

# Admission Validity Results (2 of 2)

- The adjusted correlation of HSGPA and FYGPA is 0.56; the multiple correlation of the SAT (CR, M, and W combined) with FYGPA (Adj. $r = 0.54$).
- The increment in predictive validity attributable to the SAT when HSGPA is taken into account is 0.07.
- The increment in validity attributable to the Writing section over and above the CR and M sections is 0.02. When HSGPA is also considered, the increment in validity attributable to the Writing section is 0.01.

# Mean FYGPA by SAT Score Band, Controlling for HSGPA



# Questions?

Thank you!

**Feel free to email with questions or your interest in participating in the national SAT Validity Study at eshaw@collegeboard.org.**

Researchers are encouraged to freely express their professional judgment. Therefore, points of view or opinions stated in College Board presentations do not necessarily represent official College Board position or policy.



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