PROGRESS IN INTERNATIONAL READING LITERACY STUDY

PIRLS

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PIRLS 2011 User Guide for the International Database

Supplement 3

Variables Derived from the Student, Home, Teacher, and School Questionnaire Data

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Overview

This supplement contains documentation on all the derived variables contained in the PIRLS and prePIRLS 2011 data files that are based on background questionnaire variables. These variables were used to report background data in the *PIRLS 2011 International Results in Reading* report, and are made available as part of this database to be used in secondary analyses. This supplement has four sections corresponding to each background questionnaire from which reporting variables are derived.

Section 1:   Student Questionnaire

Section 2:   Home Questionnaire (Learning to Read Survey)

Section 3:   Teacher Questionnaire

Section 4:   School Questionnaire

The following information is provided for each derived variable:

- Derived Variable Name

- Variable Label

- Title of International Report Exhibit

- Report Location

- A procedural description of how the derived variable was computed, including missing data rules if different from the general missing data rule described below

- Information about whether the variable was available in the previous cycle

Derived Variable Naming Convention

The derived variables are named according to the variable-naming convention in the PIRLS 2011 international database (see Chapter 4).

Exhibit 1   Variables Derived from PIRLS Data

Variable Naming Convention	Data Source
ASDG***	Variables derived from student background data
ASDH***	Variables derived from home background data
ATDG***	Variables derived from teacher background data
ACDG***	Variables derived from school background data

Missing Rule for Derived Variables

When calculating derived variables, students were only included if they had valid responses for at least 2/3 of the source variables. Students who did not have responses for 2/3 of the source variables were considered missing for the derived variable.

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Section 1

Student Questionnaire

Derived Variable Name: ASDG05S	Variable Label: Number of Home Study Supports	Fourth Grade

Title of International Report Exhibit

Home Resources for Learning; Components of "Home Resources for Learning"

Report Location

4.1; 4.2

Procedure

Based on responses to the following question in the Student Questionnaire:

Do you have any of these things in your home? SQG-05de

Own room (ASBG05D),

Internet connection (ASBG05E)

Response options: "Yes"; "No"

0 (ASBG05D = "No" and ASBG05E = "No") = Neither own room nor Internet connection

1 ((ASBG05D = "Yes" and ASBG05E = "No") or (ASBG05D = "No" and ASBG05E = "Yes")) = Either own room or Internet connection but not both

2 (ASBG05D = "Yes" and ASBG05E = "Yes") = Both own room and Internet connection

Set derived variable to missing if either source variable is missing.

0=Neither Own Room nor Internet Connection, 1=Either Own Room or Internet Connection, 2=Both Own Room and Internet Connection

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Section 2

Home Questionnaire

Derived Variable Name: ASDHOCCP	Variable Label: Parents' Highest Occupation Level	Fourth Grade

Title of International Report Exhibit

Home Resources for Learning; Components of "Home Resources for Learning"

Report Location

4.1; 4.2

Procedure

Based on responses to the following question in the Home Questionnare:

What kind of work do the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian) do for their main jobs? (HQ-20, ASBH20A, ASBH20B)

Response options: "Has never worked for pay"; "Small business owner"; "Clerk"; "Service or sales worker"; "Skilled agricultural or fishery worker"; "Craft or trade worker"; "Plant or machine operator"; "General laborer"; "Corporate manager or senior official"; "Professional"; "Technician or associate professional"; "Not applicable"

Collapse response options above into the following categories:

1 ("Corporate manager or senior official", "Professional", or "Technician or associate professional") = Professional
2 ("Small business owner") = Small business owner
3 ("Clerk" or "Service or sales worker") = Clerical
4 ("Skilled agricultural or fishery worker", "Craft or trade worker", or "Plant or machine operator") = Semi-professional
5 ("General laborer") = General laborer
6 ("Never worked for pay") = Never worked for pay
7 ("Not applicable") = Not applicable

Using these categories, the smaller value of the variables ASBH20A and ASBH20B is retained.

1=Professional, 2=Small Business Owner, 3=Clerical, 4=Skilled Worker, 5=General Laborer, 6=Never Worked Outside Home, 7=Not Applicable

Trend Comments

See ASDHOCCP in PIRLS 2006

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Derived Variable Name: ASDHEDUP	Variable Label: Parents' Highest Education Level	Fourth Grade

Title of International Report Exhibit

Home Resources for Learning; Components of "Home Resources for Learning"

Report Location

4.1; 4.2

Procedure

Based on responses to the following questions in the Home Questionnaire:

What is the highest level of education completed by the child's father (or stepfather or male guardian) and mother (or stepmother or female guardian)? HQ-17 (ASBH17A, ASBH17B)

Response options: "Did not go to school"; "Some <ISCED Level 1 or 2>"; "<ISCED Level 2>"; "<ISCED Level 3>"; "<ISCED Level 4>"; "<ISCED Level 5b>"; "<ISCED Level 5a, first degree>"; "Beyond <ISCED Level 5a, first degree>"; "Not applicable"

Collapse the response options above into the following categories:

1 (" <ISCED Level 5a, first degree>" or "Beyond <ISCED Level 5a, first degree>") = Finished University or higher

2 ("<ISCED Level 4>" or "<ISCED Level 5b>") = Finished Post-Secondary Education but not University

3 ("<ISCED Level 3>") = Finished Upper-secondary

4 ("<ISCED Level 2>") = Finished Lower-Secondary

5 ("Some <ISCED Level 1 or 2>" or "Did not go to school") = Finished some primary or lower-secondary or Did not go to school

6 ("Not applicable") = Not applicable

Using these categories, the smaller value (i.e., higher education level) of the variables ASBH17A and ASBH17B is retained.

1=Finished university or higher, 2=Finished post-secondary but not university, 3=Finished upper-secondary, 4=Finished lower-secondary, 5=Some primary, lower-secondary or no school

Trend Comments

See ASDHEDUP in PIRLS 2006

| Derived Variable Name: ASDHAPS | Variable Label: Student Attended Preschool | Fourth Grade |

Title of International Report Exhibit

Students Attended Preprimary Education

Report Location

4.7

Procedure

Based on responses to the following questions in the Home Questionnaire:

Did your child attend ISCED Level 0? HQ-04a (ASBH04A)

Response options: "Yes"; "No"

How long was he/she in <ISCED Level 0>? HQ-04b (ASBH04B)

Response options: "3 years or more"; "Between 2 and 3 years"; "2 years"; "Between 1 and 2 years"; "1 year or less"

1 (ASBH04A = "Yes" and ASBH04B = "3 years or more") = 3 years or more

2 (ASBH04A = "Yes" and ASBH04B = "Between 2 and 3 years" or "2 years") = Less than 3 years but more than 1 year

3 (ASBH04A = "Yes" and ASBH04B = "1 year or less") = 1 year or less

4 (ASBH04A = "No") = Did not attend

1=3 Years or More, 2=Less than 3 Years but More than 1 Year, 3=1 Year or Less, 4=Did Not Attend

Section 3

Teacher Questionnaire

| Derived Variable Name: ATDG01 | Variable Label: Teachers Years of Experience | Fourth Grade |

Title of International Report Exhibit

Teachers' Years of Experience

Report Location

7.3

Procedure

Based on the following questionnaire from the Teacher Questionnaire, TQG-01 (ATBG01):

By the end of this school year, how many years will you have been teaching altogether?

(Open-response item)

1 (ATBG01 >= 20) = 20 years or more,
2 (ATBG01 >= 10 and ATBG01 < 20) = At Least 10 But Less Than 20 Years,
3 (ATBG01 >= 5 and ATBG01 < 10) = At Least 5 But Less Than 10 Years,
4 (ATBGG01 < 5) = Less than 5 years)
Set the derived variable to missing if the source variable is missing.

1=20 Years or More, 2=At Least 10 but Less than 20 Years, 3=At Least 5 but Less than 10 Years, 4=Less than 5 Years

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| Derived Variable Name: ATDRLAHW | Variable Label: Language Instructional Hours per Week | Fourth Grade |

Title of International Report Exhibit

Instructional Time Spent on Language and Reading

Report Location

8.4

Procedure

Based on the teachers' responses to the following questions:

In a typical week, how much time do you spend on language instruction and/or activities with students? TQR-01A

(ATBR01AA, ATBR01AB)

(Open-response item)

Compute language instructional hours per week: ATBR01AB divided by 60, plus ATBR01AA.

Code to missing if hours (ATBR01AA) is missing.

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VARIABLES DERIVED FROM THE STUDENT, HOME,
TEACHER, AND SCHOOL QUESTIONNAIRE DATA
SUPPLEMENT 3   11

Derived Variable Name: ATDRREHW	Variable Label: Reading Hours/Week Across Curriculum	Fourth Grade

Title of International Report Exhibit

Instructional Time Spent on Language and Reading

Report Location

8.4

Procedure

Based on the teachers' responses to the following questions:

Regardless of whether or not you have formally scheduled time for reading instruction, in a typical week about how many hours/minutes do you spend on reading instruction and/or activities with the students? TQR-02A (ATBR02A, ATBR02B) (Open-response item)

Compute language instructional hours per week: ATBR02B divided by 60, plus ATBR02A.

Code to missing if hours (ATBR02A) is missing.

| Derived Variable Name: ATDRRLHW | Variable Label: Reading Hours/Week as Part of Language | Fourth Grade |

Title of International Report Exhibit

Instructional Time Spent on Language and Reading

Report Location

8.4

Procedure

Based on the teachers' responses to the following questions:

What proportion of time spent on <language of test> language instruction and/or activities is spent on reading? TQR-01BA (ATBR01BA)

(Open-response item)

Compute reading hours per week as part of language by multiplying ATDRLAHW by ATBR01BA, then dividing by 100. Code to missing if either component variable is missing.

Section 4

School Questionnaire

Derived Variable Name: ACDG03	Variable Label: School Composition by Student Backgd	Fourth Grade

Title of International Report Exhibit

School Composition by Student Economic Background

Report Location

5.2

Procedure

Based on the following question:

Approximately what percentage of students in your school come from economically disadvantaged homes? SCQ-03a (ACBG03A)

Approximately what percentage of students in your school come from economically affluent homes? SCQ-03b (ACBG03B)

Response options: "0 to 10%"; "11 to 25%"; "26 to 50%"; "More than 50%"

1 (ACBG03A <=2 ("0 to 10% or "11 to 25%") and ACBG03B >=3 ("26 to 50%"; "More than 50%")) = Schools With More Affluent Than Disadvantaged Students

3 (ACBG03A >=3 ("26 to 50%"; "More than 50%") and ACBG03B <= 2 ("0 to 10% or "11 to 25%")) = Schools With More Disadvantaged Than Affluent Students

2 (All other combinations) = Schools with Neither More Affluent nor More Disadvantaged Students

Set the derived variable to missing if either source variable is missing.

1=Schools with More Affluent than Disadvantaged Students, 2= Schools with Neither More Affluent nor More Disadvantaged students, 3= Schools with More Disadvantaged than Affluent Students

Derived Variable Name: ACDGELS	Variable Label: Students Having Early Literacy Skills	Fourth Grade

Title of International Report Exhibit

Schools Where Students Enter the Primary Grades with Early Literacy Skills

Report Location

5.4

Procedure

Based on the following questions from the School Questionnaire:

About how many of the students in your school can do the following when they begin primary/elementary school? SCQ-16

Recognize most of the letters of the alphabet (ACBG16A),

Read some words (ACBG16B),

Read sentences (ACBG16C),

Write letters of the alphabet (ACBG16D),

Write some words (ACBG16E)

Response options: 1="Less than 25%"; 2="25-50%"; 3="51-75%"; 4="More than 75%"

Reverse code all items.

Responses to the items are then averaged.

1 (Average > 3.25) = More than 75% Enter with Skills

2 (2.5 < Average <= 3.25) = 51-75% Enter with Skills

3 (1.75 <= Average <= 2.5) = 25-50% Enter with Skills

4 (Average < 1.75) = Less than 25% Enter with Skills

1=Schools Where More than 75% Enter with Skills, 2=Schools Where 51-75% Enter with Skills, 3= Schools Where 25-50% Enter with Skills, 4= Schools Where Less than 25% Enter with Skills

Trend Comments

See ACDG1GR in PIRLS 2006, with modified categories

Derived Variable Name: ACDG09	Variable Label: School Library Books	Fourth Grade

Title of International Report Exhibit

Size of School Library

Report Location

5.7

Procedure

Based on the following questions:

Does your school have a library? SCQ-09 (ACBG09)
Response options: "Yes"; "No"

Approximately how many books with different titles does your school library have (exclude magazines and periodicals)? (ACBG09A)
Response options: "250 or fewer"; "251-500"; "501-2,000"; "2,001-5,000"; "5,001-10,000"; "More than 10,000"

Assign students to four categories:
1 (ACBG09=1 ("Yes") and ACBG09A>4 ("5,001-10,000" or "More than 10,000")) = School Library with More than 5,000 Books
2 (ACBG09=1 ("Yes") and ACBG09A=3 or 4 ("501-2,000" or "2,001-5,000")) = School Library with 501-5,000 Books
3 (ACBG09=1 ("Yes") and ACBG09A<3 ("250 or fewer" or "251-500")) = School Library with 500 Books or Less
4 (ACBG09=2 ("No")) = No School Library

1=School Library with More than 5,000 Books, 2=School Library with 500-5,000 Books, 3=School Library with 500 Books or Less, 4=No School Library

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Derived Variable Name: ACDGCMP	Variable Label: Computer Availability for Instruction	Fourth Grade

Title of International Report Exhibit

Schools with Computers Available for Instruction

Report Location

5.8

Procedure

Based on the following questions:

What is the total enrollment of fourth grade students in your school as of the first day of the month PIRLS 2011 testing begins? SCQ-02 (ACBG02)

(Open-response item)

What is the total number of computers that can be used for instructional purposes by fourth grade students? SCQ-07 (ACBG07)

(Open-response item)

Compute number of students per computer by dividing the number of students by number of computers.

Set number of students per computer to missing if any of the source variables are missing except if the number of computers equals zero.

1 (Number of students per computer =< 2.5) = 1 Computer for 1-2 Students

2 (Number of students per computer > 2.5 and <5.5) = 1 Computer for 3-5 Students

3 (Number of students per computer >=5.5) = 1 Computer for 6 or More Students

4 (ACBG07 = 0) = No computer

1=1 Computer for 1-2 Students, 2=1 Computer for 3-5 Students, 3=1 Computer for 6 or More Students, 4=No Computers Available

Derived Variable Name: ACDG06HY	Variable Label: Total Instructional Hours per Year	Fourth Grade

Title of International Report Exhibit

Instructional Time Spent on Language and Reading

Report Location

8.4

Procedure

Based on the principals' responses to the following questions:

How many days per year is your school open for instruction? SCQ-06A (ACBG06A)
(Open-response item)

What is the total instructional time, excluding breaks, in a typical day? SCQ-06Bab (ACBG06BA, ACBG06BB)
(Open-response item)

Step 1: Compute instructional hours per day:
   If hours (ACBG06BA) is missing, use ACBG06BB divided by 60,
   if minutes (ACBG06BB) is missing, use ACBG06BA,
   otherwise use ACBG06BB divided by 60, plus ACBG06BA.
   If both minutes and hours are missing, set result to missing.
Step 2: Compute hours of school per year: Multiply the result of Step 1 by ACBG06A.

Derived Variable Name: ACDG06	Variable Label: Number of Days per Week for Instruction	Fourth Grade

Title of International Report Exhibit

Instructional Time Spent on Language and Reading

Report Location

8.4

Procedure

Based on the principals' responses to the following questions:

In one calendar week, how many days is the school open for instruction? SCQ-06C (ACBG06C)

Response options: "6 days"; "5 1/2 days"; "5 days"; "4 1/2 days"; "4 days"; "Other"

Compute number of days per week for instruction, ACDG06, by recoding ACBG06C as follows:

1 ("6 days") = 6
2 ("5 1/2 days") = 5.5
3 ("5 days") = 5
4 ("4 1/2 days") = 4.5
5 ("4 days") = 4
6 ("Other") = 3

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VARIABLES DERIVED FROM THE STUDENT, HOME,
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SUPPLEMENT 3   **21**

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