



Understanding/Utilizing PS Code – Common and Not So Common PowerSchool Student Information System

Carla Dancz

Director of Student Information Systems

TRECA – Marion, OH

Email: cdancz@treca.org



Agenda

- Welcome and Introductions
- Codes to Modify a Field Display
- Codes that Mirror PowerSchool Fields
- Code Delimiters
- Code Attributes
- Test Score Codes



Session Goal

The goal of this session is to ...

- To become familiar with codes or DATs to change the way data is displayed on reports or exports



About the trainer. . .

Carla Dancz

PowerSchool Experience:

- TRECA - Director of SIS
- Pearson - PowerSchool Trainer
- CESA 7 - Green Bay, WI
- School District - Luxemburg, WI

Personal:

- Live in Marion, OH
- 2 sons
 - 18 Year Old - Mason
 - 23 Year Old - Brant
- Grandma to 3 Year old Reagan



INTRODUCTION

Ever wanted to know some of those undocumented PowerSchool codes or where you can use some codes you may already know? We'll dive into some of the more common PS codes and what you can do to get data out in a way you might not have even know possible.



Resources for Field Names & Codes

To get the data you want, you need to know the field name. Some resources that are available for fields and DATs are listed below:

- Download the Data Dictionary from PowerSource
- Navigate to Direct Database Export (DDE)
- Click one of the Field List links
- Data Access Tags Supplement (KB 55742)
- Object Report Codes (KB 9912)



Field Formats

Use this format when working with PowerSchool fields:

^(fieldname)

For example:

- ^(Last_Name)
 - ^(First_Name)
 - ^(LastFirst)
 - ^(DOB)
 - ^(Gender)
 - ^(Street)
- Field names are not case-sensitive and will not contain spaces.



Student/Staff Fields

When pulling data using field names, the result will give you the data just as it was entered in PowerSchool

^(Last_Name) Smith
 ^(First_Name) John
 ^(LastFirst) Smith, John A
 ^(DOB) 7/8/1998
 ^(Gender) F
 ^(Street) 555 Main St.



Modifying Data for Display

To modify the way data in the field is displayed in an export or on the List Students Screen, insert a semicolon after the fieldname, and then specify the format:

^(fieldname;XXXX)

^(LastFirst;uppercase)

DANCZ, MASON C

^(LastFirst;lowercase)

dancz, mason c



Modifying Date Field Output

Date field outputs can be modified by using the a dateformat modifier. Notice that one D is sufficient for “day.”

Examples:

`^(dob;dateformat=MMMM D, YYYY)`
March 15, 2001

`^(dob;dateformat=MMM D, YYYY)`
Mar 15, 2001



Additional Examples

Code;Code Operator	Description
<code>^(entrydate;dateformat=MMDDYY)</code>	090199
<code>^(entrydate;dateformat=MMDDYYYY)</code>	09011999
<code>^(entrydate;dateformat=YYMMDD)</code>	990901
<code>^(entrydate;dateformat=MMMM)</code>	September
<code>^(entrydate;dateformat=MMMM D)</code>	September 1
<code>^(entrydate;dateformat=MMMM DD)</code>	September 01
<code>^(entrydate;dateformat=MMMM YYYY)</code>	September 1999



Using Decode

Use “decode” to indicate how you want the output of data in a field to be displayed.

```
^(decode;fieldname;value;replace;value;replace;else)
```

Examples:

```
^(decode;^(gender);M;Male;F;Female;Blank)
```

```
^(decode;^(grade_level);9;Fresh;10;Soph;11;Jun;12;Sen;)
```



If/Then Statement

If/Then statements are used to evaluate an expression and return a specified value if the expression is true.

```
^(field;if.fieldvalue.XX.then=result)
```

```
^(field;if.fieldvalue#XX.then=result)
```

```
^(field;if.blank.then=result)
```

```
^(field;if.not.blank.then=result)
```

- See KB 6108 for specific examples



Date Codes

By default, dates are displayed in numbers with up to two digits for the month, two for the day, and four for the year, plus a slash between elements.

^[Date] 8/2/2014

- Other Date Formats:

^[Short.Date] 8/2/14

^[Letter.Date] August 2, 2014

*Note square brackets are used instead of parentheses



Date Format Options

Display dates with a four-digit year by adding brackets before and after the code expression because "Date" is not a field from the database, but a calculation the server makes.

^[date;dateformat=MM/DD/YYYY]

08/15/2014

*You can use this date format only in PowerSchool 7.0 and above



Codes that Mirror Fields

Some codes resemble PowerSchool fields, but they are not PowerSchool fields.

^(age)
 ^(schoolname)
 ^(schoolabbr)
 ^(yearname)
 ^(yearabbr)
 ^(termname)
 ^(termabbr)



Age

Age is not a field in the database. PowerSchool does a calculation based on the student's DOB.

- Mason is **^(age)** old.
- Mason is **17 yrs 5 months** old.
- Mason is **^(age;long)** old.
- Mason is **17 years 5 months and 10 days** old.



No Age Short but...

Use the following code to render only the number of years in the List Students Function screen.

```
*evaluate left("^^(age)",2)
```

Example in a report or form letter:

Mason was $^{(*evaluate left("^^(age)",2))}$ in March.

Mason was 17 in March.



School Name or Abbreviation

Use these codes to save time when creating district-wide form letters and reports, don't create a separate letter or report for each school.

```
^(schoolname) Apple Grove High School
```

```
^[39]name)
```

```
^(schoolabbr) AGHS
```



School Year and Term

Use the year and term codes to print the full school year and the full term. Or, print the abbreviated school year and the abbreviated term.

^(yearname) 2013-2014

^(yearabbr) 13-14

^(termname) 13-14 Semester 1

^(termabbr) S1



Smart Pronouns

PowerSchool prints the appropriate pronoun by evaluating the student's gender.

- ^(He/She)
- ^(he/she)
- ^(His/Hers)
- ^(his/hers)
- ^(him/her)
- ^(Son/Daughter)
- ^(son/daughter)



Student Fee Balance

^(Fee_GetStudentBalance)

- Returns the student's current fee balance.
- When using in the List Students Group Function, omit the caret and parenthesis
- To get a list of students that owe a balance you could use the following search:

***fee_balance.balance>0**



DATs with Multiple Delimiters

- Period Info
^(*period_info;Expression;FieldName)
- Stored By Course Period Cached
^(stored.by.course.period.cached;expression;term;field)
- Stored Grades
^(stored.by.course.number;CourseNumber;StoreCode;FieldName)



Period Info – How it Works (KB 54938)

Period_Info Rules

- When used in List Students, omit the caret and parenthesis
- The expression must be entered exactly as seen on the Quick Lookup page, including sections that encompass more than one day/period - all periods/days must be listed exactly as seen in the expression.
- Period_info cannot interpret two expressions. If you would like to use the DAT for more than one section, list the DAT as many times as necessary, each with a different expression. (See KB 7114 or KB 7566 for possible decode scenarios.)



Period Info

^(*period_info;Expression;FieldName)

Example: ^(*period_info;1(A);teacher_name)

Additional Field Options

- Course_Name
- Course_Number
- Section_Number
- Current_Citizenship
- Teacher_Comment
- Current_Percent
- Current_Grade
- Room



Period Info – Multiple Teachers

All teachers ever associated to a section:

`^(*period_info;1(A);all_section_teachers)`

All teachers currently associated to a section:

`^(*period_info;1(A);current_section_teachers)`

*Note: Name format is 'last, first'. Only teachers with roles flagged for display on reports will be listed. Teachers are listed according to the sort order defined in the role module.



Undocumented Period Info DAT

- To pull only a teacher's first or last name

`^(*period_info;1(A);teacher_i_first_name)`

`^(*period_info;1(A);teacher_i_last_name)`

- To pull a teacher's title, use the title field from the teachers table. Make sure you have the title populated first with Mr. or Ms.

`^(*period_info;1(A);teacher_i_title)`



Known Issue (KB 9350)

Issue:

- If a term is specified when using the period_info data access tag (DAT), PowerSchool will not return results. When the term is removed, the code works as expected.



Stored by Course Period Cached

`^(stored.by.course.period.cached;expression;term;field)`

Examples:

`^(stored.by.course.period.cached;1(A-E);S1;Course_Number)`

`^(stored.by.course.period.cached;1(A-E);S1;Grade)`

- Issues with this DAT usually caused from not using the correct period expression.
- The expression must be entered exactly as seen on the Quick Lookup and Section page.
- Valid fields to use with this DAT are located in the [StoredGrades] table.



Additional Field Options

- ^(stored.by.course.period.cached;XX;TT;Absences)
- ^(stored.by.course.period.cached;XX;TT;Behavior)
- ^(stored.by.course.period.cached;XX;TT;Comment)
- ^(stored.by.course.period.cached;XX;TT;Course_Name)
- ^(stored.by.course.period.cached;XX;TT;Course_Number)
- ^(stored.by.course.period.cached;XX;TT;Credit_Type)
- ^(stored.by.course.period.cached;XX;TT;DateStored)
- ^(stored.by.course.period.cached;XX;TT;EarnedCrHrs)
- ^(stored.by.course.period.cached;XX;TT;GPA_Points)
- ^(stored.by.course.period.cached;XX;TT;grade)
- ^(stored.by.course.period.cached;XX;TT;Percent)
- ^(stored.by.course.period.cached;XX;TT;PotentialCrHrs)
- ^(stored.by.course.period.cached;XX;TT;SchoolName)
- ^(stored.by.course.period.cached;XX;TT;Tardies)
- ^(stored.by.course.period.cached;XX;TT;Teacher_Name)
- ^(stored.by.course.period.cached;XX;TT;Section_Number)
- ^(stored.by.course.period.cached;XX;TT;School_Phone)
- ^(stored.by.course.period.cached;XX;TT;Email_Addr)



Using List Students

Report Title (shown at top of page):

Col	Field Name	Column Title
1.	Fields <input type="text" value="*count"/>	<input type="text" value="# of Rows"/>
2.	Fields <input type="text" value="lastfirst"/>	<input type="text" value="Name"/>
3.	Fields <input type="text" value="*period_info;2(A);teacher_name"/>	<input type="text" value="Teacher"/>
4.	Fields <input type="text" value="*period_info;2(A);room"/>	<input type="text" value="Room"/>
5.	Fields <input type="text" value="*period_info;2(A);course_name"/>	<input type="text" value="Course"/>
6.	Fields <input type="text"/>	<input type="text"/>
7.	Fields <input type="text"/>	<input type="text"/>

(Select students) > Group Functions > List Students



The Rendered Report

Second Period Information

Apple Grove High School 1

# of Rows	Name	Teacher	Room	Course
1.	Anderson, Cody N	Higgins, Theodore X	124	U.S. History
2.	Andrews, Joshua M	Higgins, Theodore X	124	U.S. History
3.	Bailey, Jenilyn H	Berndt, Gordie E	302	Music
4.	Bennett, Cody B	Berndt, Gordie E	302	Music
5.	Briggs, Jeffrey	Jorgenson, James J	220	English 1
6.	Briggs, Justin D	Swaney, Jim H	GymA	Phys Ed 9
7.	Brito, Jordan H	Swaney, Jim H	GymA	Phys Ed 9
8.	Bushman, Joshua C	Swaney, Jim H	GymA	Phys Ed 9
9.	Butler, Holly C	David, Peter	Pool	Swimming
10.	Butterfield, Nicholas D	David, Peter	Pool	Swimming

Attendance DATs

^(*DA) – Days in Attendance (Days Present)

^(*DM) – Daily Membership (Days Enrolled)

^(*DABS) – Days Absent (Based on Conversions)

You can add a term abbreviation or beginning and ending date to limit the totals on each of these codes

^(*DABS;Q1)

^(*DM;8/21/13;12/21/13)



Formatting Numbers

Examples:

- Days Absent: $^(*DABS;Q1;format=#0.0)$
- Days Present: $^(*DA;Q1;format=##0)$

Rounding:

- Days Absent Rounded to 2 Decimal places
 $^(*evaluate\ round(^(*DABS;8/17/13;12/16/13),2))$



Math Functions Using Operator Value

Add, subtract, multiply or divide a value in a static field.

$^(fieldname;operatorvalue)$

Example: $^(grade_level;+1)$

Your $^(son/daughter)$, $^(first_name)$, will be promoted to Grade $^(grade_level;+1)$ next year.

Result:

Your son, Mason, will be promoted to Grade 12 next year.



Additional Math Functions

You can perform a math function on a group of numbers that you type in or the numbers can be the result of another DAT.

$$^(f.add;a;b;c;d)$$

Example:

$$^(f.add;^(per.att;1(M-F);T;Q1);^(per.att;2(M-F);T;Q1))$$

Other Options

- f.add
- f.subt
- f.mult
- f.div



Using Current Date

This code will allow you to evaluate the current date in your code.

$$^(f.currentdate)$$

Examples:

$$^(*DA;^(entrydate);^(f.currentdate))$$

$$^(*DM;^(entrydate);^(f.currentdate))$$


Combining Address Fields

`^(*evaluate “^(city),^(state)^(zip)”)`

To use in the List students take off the caret and the outside parenthesis.



Removing HTML

`^(fieldname;nohtml)`

- This code is useful when you want to remove any line breaks or returns a user or the system may have added to comment, log or any text field.

Example using entry field in the Log Table:

`^(entry;nohtml)`



