

## ConstructMap v4.3

### Instructions for Generating the Chapter 6 Examples<sup>1</sup>

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**Figure 6.5 – A Wright map for the trichotomous PF-10 instrument, showing 67% and 95% confidence intervals for a respondent with a score of 13**

1. Sort the database into ID order by clicking on the column heading **Name**
2. Select the case with an ID of **1017936** by clicking on the ID number (this case has a raw score of 13)
3. Select the menu option **Reports & Maps – Report Options** and set the **Maximum Scale** to **5** and the **Minimum Scale** to **-5**, then click on **OK**
4. Select the menu option **Reports & Maps – Individual Reports – Responses Report**
5. **Browse** to the directory where you want to store the file and enter a filename of **resp\_1017936**, click on **SAVE**
6. Confirm that the **Item Set** is set to **base** (not required for ConstructMap Lite), then click on **OK**

The person's proficiency estimate and responses to each item will be displayed on the screen and also stored on your system in the folder you specified with the filename **resp\_1017936.txt**.

Note in the report that the proficiency (MLE) is 0.87 and the standard error (standard deviation) is 0.59. The total of all the responses, shown in the rightmost column, is 13.

Now take a look at the **wmpf10\_2.txt** that you created for Chapter 5. Note that each vertical bar, or row, represents .2 logits (shown at the bottom of the report; see example

```

projects\pfl10_trich\resp_1017936.txt
Oct 5, 2005 3:59:45 PM

                                PF10 Trichotomous
                                RESPONSES FOR 1017936

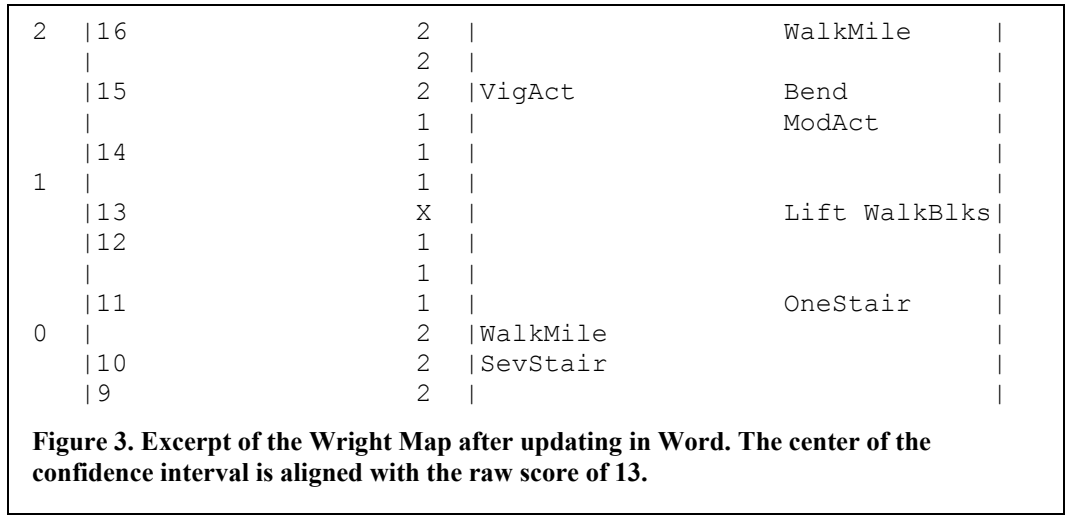
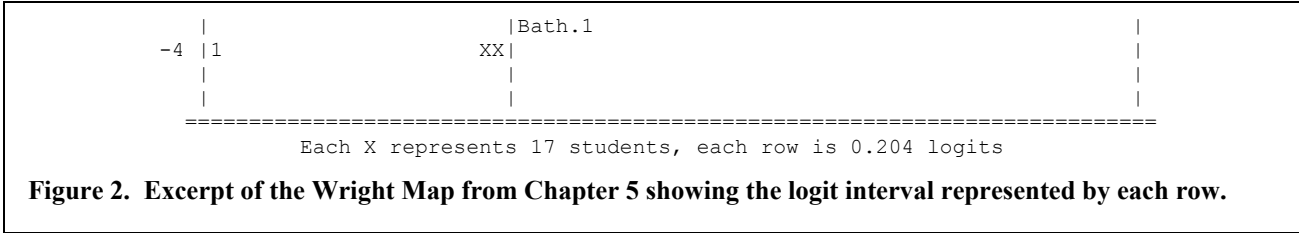
Item Set: base
VARIABLE: pf
      MLE: 0.87371 SE: 0.58727 INFIT: 0.96 T: 0.06 OUTFIT: 0.91 T: -0.01
ID  Activity      Item          Difficulty  Variable  Response
-----
1   base          VigAct       3.34119    pf         0
2   base          ModAct       0.07995    pf         1
3   base          Lift         -0.39855   pf         1
4   base          SevStair    1.12374    pf         0
5   base          OneStair    -1.02021   pf         2
6   base          Bend        0.15230    pf         2
7   base          WalkMile    1.03837    pf         1
8   base          WalkBlks   -0.01270    pf         2
9   base          WalkOne    -1.50903    pf         2
10  base          Bath       -2.79504    pf         2
-----

```

**Figure 1. Responses Report for case 1017936.**

<sup>1</sup> These instructions assume the reader is continuing after completing the Chapter 5 instructions.

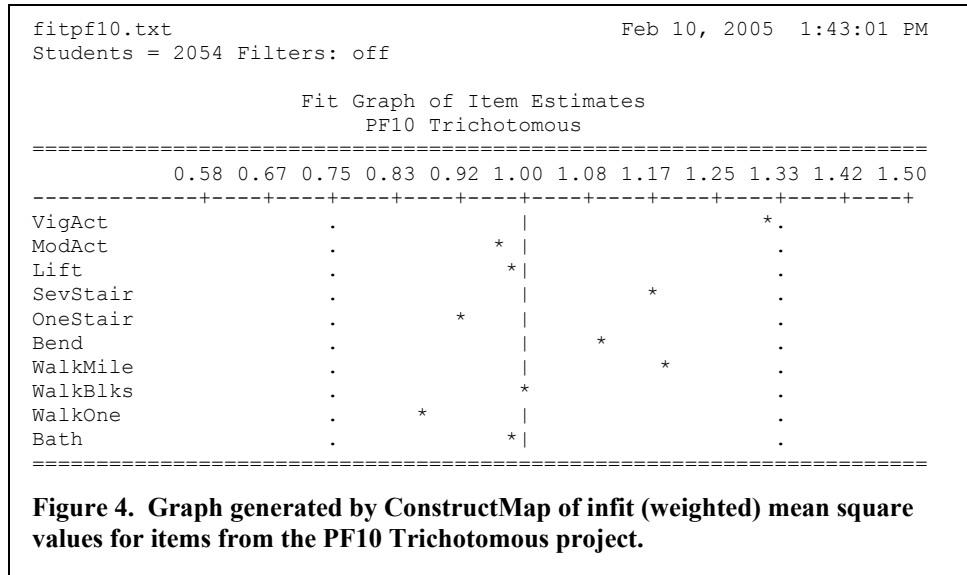
in Figure 2). You can now plot the 1's and 2's around the row where a score of 13 appears. Since each row is .2 logits, and one SD is .59 logits, you need 3 rows of 1's above and below the student location (where the “x” is) to represent the 67% confidence interval, and 3 rows of 2's above and below the 1's to represent the 95% confidence interval.



**Figure 6.6 – Fit results for the PF10 data (average item location)**

1. Select the menu option **Estimation Tasks – Results - Item Estimates and Fit Graph**
2. **Browse** to the directory in which you want to store the file and enter a **File Name** of **fitpf10**, then click on **Save**.
3. Set the **Calculation Method** option to **By Parameter**.
4. Set the **Display Item Mean Square Graph** option to **Yes**.
5. Set the **Re-Calculate Item Fit Statistics** to **No**.
6. Set the **Save Item Fit Statistics** to **Yes**.
7. Click on **OK** to continue.

The Item Fit Report will be displayed on the screen and also stored on your system in the folder you specified. You will see a chart like the one in Figure 6.6 at the end of the report (and also shown below).



**Table 6.1 – Three response patterns for the PF-10 scale**

The data for each row in the table can be found in the associated Responses Report for each case.

1. Sort the database into ID order by clicking on the column heading **Name**
2. Select the student with an ID of **020035I** by clicking on the ID number
3. Select the menu option **Reports & Maps – Individual Reports – Responses Report**
7. **Browse** to the directory where you want to store the file and enter a filename of **resp\_397**, click on **SAVE**
4. Confirm that the **Item Set** is set to **base** (not required for ConstructMap Lite), then click on **OK**
5. Select the student with an ID of **432336S**, select **Responses Report**, and name the file **resp\_375**
6. Select the student with an ID of **620285H**, select **Responses Report**, and name the file **resp\_381**

Each Responses Report will be displayed on the screen and also stored on your system in the folder you specified.

Open one of the reports using Word and note that the "Score" shown in Table 6.1 is the sum of the Responses found in the rightmost column of the report and the "Wt. MS" (weighted mean square) value shown in Table 6.1 is the Infit value shown in the row of numbers that begins with MLE (refer to Figure 1 for an example of a Responses Report as generated by ConstructMap).

**Figure 6.8 – Kid Maps for the three response patterns to the PF-10**

1. Sort the database into ID order by clicking on the column heading **Name**.
2. Select the case with an ID of **020035I** by clicking on the ID number.
3. Select the menu option **Reports & Maps – Individual Reports – Diagnostic Map**.



The current version of ConstructMap displays item steps differently from the version that was used to generate the figures in the text. In the left column, ConstructMap currently displays only the score level attained by the respondent. The earlier version displayed the score level attained and all lower score levels.