

## ภาคผนวก ง

อำนาจจำแนกของมาตรฐานวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนาเด็กเล็ก

ผลการวิเคราะห์อำนาจจำแนกอำนาจจำแนกของมาตรวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนา  
เด็กเล็กโดยการประมาณค่าพารามิเตอร์ความชันร่วมของมาตรวัด ( $\alpha_i$ ) ด้านจิตเชี่ยวชาญ  
(แสดงในส่วนสำคัญ)

MULTILOG--FOR MULTIPLE CATEGORICAL ITEM RESPONSE DATA--VERSION

7.0.3

DATA PARAMETERS:

NUMBER OF LINES IN THE DATA FILE: 820

NUMBER OF CATEGORICAL-RESPONSE ITEMS: 23

NUMBER OF CONTINUOUS-RESPONSE ITEMS, AND/OR GROUPS: 0

TOTAL NUMBER OF "ITEMS" (INCLUDING GROUPS): 23

NUMBER OF CHARACTERS IN ID FIELDS: 3

MAXIMUM NUMBER OF RESPONSE-CODES FOR ANY ITEM: 5

THE MISSING VALUE CODE FOR CONTINUOUS DATA: 9.0000

THE DATA WILL BE STORED IN MEMORY

ESTIMATION PARAMETERS:

THE ITEMS WILL BE CALIBRATED--

BY MARGINAL MAXIMUM LIKELIHOOD ESTIMATION

MAXIMUM NUMBER OF EM CYCLES PERMITTED: 25

NUMBER OF PARAMETER-SEGMENTS USED IS: 23

NUMBER OF FREE PARAMETERS IS: 114

MAXIMUM NUMBER OF M-STEP ITERATIONS IS 4 TIMES

THE NUMBER OF PARAMETERS IN THE SEGMENT

THE M-STEP CONVERGENCE CRITERION IS: 0.000100

THE EM-CYCLE CONVERGENCE CRITERION IS: 0.001000

THE RK CONTROL PARAMETER (FOR THE M-STEPS) IS: 0.9000

THE RM CONTROL PARAMETER (FOR THE M-STEPS) IS: 1.0000

THE MAXIMUM ACCELERATION PERMITTED IS: 0.0000

THETA-GROUP LOCATIONS WILL REMAIN UNCHANGED

OUTPUT-CONTROL PARAMETERS

THE ITEM PARAMETERS WILL BE SAVED ON FILE <jobname>.PAR

QUADRATURE POINTS FOR MML,

FIRST OBSERVATION AS READ-

ID 001

ITEMS 55545555555555554443455

ERROR MESSAGE FROM SUBROUTINE INVSD:MATRIX IS SINGULAR

FINISHED CYCLE 25

MAXIMUM INTERCYCLE PARAMETER CHANGE= 0.18918 P( 32)

ITEM SUMMARY

ITEM 1: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 1 1.02 (0.08)

B( 1) 2 -6.62 (1.13)

B( 2) 3 -5.91 (0.83)

B( 3) 4 -2.41 (0.26)

B( 4) 5 1.90 (0.13)

ITEM 2: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 6 1.11 (0.09)

B( 1) 7 -6.93 (1.31)

B( 2) 8 -5.88 (0.83)

B( 3) 9 -2.74 (0.28)

B( 4) 10 0.82 (0.12)

ITEM 3: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 11 0.95 (0.07)

B( 1) 12 -6.87 (1.19)

B( 2) 13 -5.66 (0.76)

B( 3) 14 -2.37 (0.27)

B( 4) 15 1.91 (0.14)

ITEM 4: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 16 1.20 (0.10)

B( 1) 17 -6.59 (1.22)

B( 2) 18 -5.38 (0.68)

B( 3) 19 -2.35 (0.23)

B( 4) 20 1.59 (0.11)

ITEM 5: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 21 1.14 (0.09)

B( 1) 22 -8.59 (\*\*\*\*)

B( 2) 23 -6.15 (3.89)

B( 3) 24 -2.26 (0.28)

B( 4) 25 1.67 (0.12)

ITEM 6: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 26 1.17 (0.09)

B( 1) 27 -8.28 (\*\*\*\*)

B( 2) 28 -5.41 (1.81)

B( 3) 29 -2.54 (0.28)

B( 4) 30 1.31 (0.12)

ITEM 7: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 31 1.31 (0.11)

B( 1) 32 -8.08 (\*\*\*\*)

B( 2) 33 -6.27 (6.35)

B( 3) 34 -2.98 (0.31)

B( 4) 35 0.92 (0.11)

ITEM 8: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 36 1.43 (0.11)

B( 1) 37 -7.94 (\*\*\*\*)

B( 2) 38 -5.97 (4.19)

B( 3) 39 -2.26 (0.21)

B( 4) 40 1.35 (0.11)

ITEM 9: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 41 1.23 (0.10)

B( 1) 42 -8.09 (\*\*\*\*)

B( 2) 43 -5.53 (2.08)

B( 3) 44 -2.72 (0.30)

B( 4) 45 1.11 (0.12)

ITEM 10: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 46 1.24 (0.10)

B( 1) 47 -8.14 (\*\*\*\*)

B( 2) 48 -5.84 (2.93)

B( 3) 49 -2.66 (0.27)

B( 4) 50 1.70 (0.11)

ITEM 11: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 51 1.17 (0.09)

B( 1) 52 -8.12 (\*\*\*\*)

B( 2) 53 -6.02 (4.06)

B( 3) 54 -2.60 (0.27)

B( 4) 55 1.55 (0.13)

ITEM 12: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 56 1.51 (0.12)

B( 1) 57 -7.62 (\*\*\*\*)

B( 2) 58 -5.84 (3.90)

B( 3) 59 -2.14 (0.20)

B( 4) 60 1.54 (0.10)

ITEM 13: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 61 1.36 (0.11)

B( 1) 62 -8.02 (\*\*\*\*)

B( 2) 63 -6.13 (4.94)

B( 3) 64 -2.26 (0.22)

B( 4) 65 1.74 (0.11)

ITEM 14: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 66 1.52 (0.12)

B( 1) 67 -7.82 (\*\*\*\*)

B( 2) 68 -5.83 (3.94)

B( 3) 69 -2.48 (0.22)

B( 4) 70 1.32 (0.10)

ITEM 15: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 71 1.42 (0.12)

B( 1) 72 -7.74 (\*\*\*\*)

B( 2) 73 -5.52 (2.32)

B( 3) 74 -2.41 (0.23)

B( 4) 75 1.48 (0.11)

ITEM 16: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 76 1.17 (0.10)

B( 1) 77 -8.08 (\*\*\*\*)

B( 2) 78 -6.54 (7.18)

B( 3) 79 -2.43 (0.25)

B( 4) 80 1.73 (0.13)

ITEM 17: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 81 0.82 (0.07)

B( 1) 82 -6.79 (1.04)

B( 2) 83 -5.50 (0.73)

B( 3) 84 -2.29 (0.29)

B( 4) 85 2.36 (0.17)

ITEM 18: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 86 0.97 (0.07)

B( 1) 87 -7.49 (1.50)

B( 2) 88 -6.00 (0.86)

B( 3) 89 -2.31 (0.25)

B( 4) 90 1.76 (0.14)

## ITEM 19: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A 91 0.60 (0.06)

B( 1) 92 -7.78 (1.32)

B( 2) 93 -5.77 (0.94)

B( 3) 94 -1.79 (0.37)

B( 4) 95 2.81 (0.23)

## ITEM 20: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A 96 1.13 (0.00)

B( 1) 97 -1.39 (0.00)

B( 2) 98 -19.14 (0.00)

B( 3) 99 -2.57 (0.00)

B( 4) 100 1.74 (0.00)

## ITEM 21: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A 101 1.05 (0.08)

B( 1) 102 -8.66 (\*\*\*\*)

B( 2) 103 -6.97 (7.77)

B( 3) 104 -2.58 (0.29)

B( 4) 105 1.83 (0.13)

## ITEM 22: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A 106 1.24 (0.10)

B( 1) 107 -6.39 (1.24)

B( 2) 108 -5.83 (0.98)

B( 3) 109 -2.51 (0.24)

B( 4) 110 1.69 (0.12)

## ITEM 23: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A 111 1.13 (0.08)

B( 1) 112 -6.76 (1.35)

B( 2) 113 -5.79 (0.83)

B( 3) 114 -2.77 (0.27)

B( 4) 115 1.39 (0.00)

NEGATIVE TWICE THE LOGLIKELIHOOD= 8644.1

(CHI-SQUARE FOR SEVERAL TIMES MORE EXAMINEES THAN CELLS)

NORMAL PROGRAM TERMINATION

START DATE: 03-03-2013

START TIME: 21:01:57

END TIME: 21:01:57

ผลการวิเคราะห์อำนาจจำแนกอำนาจจำแนกของมาตรวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนา  
เด็กเล็กโดยการประมาณค่าพารามิเตอร์ความชันร่วมของมาตรวัด ( $\alpha_i$ ) ด้านจิตสังเคราะห์  
(แสดงในส่วนสำคัญ)

MULTILOG--FOR MULTIPLE CATEGORICAL ITEM RESPONSE DATA--VERSION  
7.0.3

DATA PARAMETERS:

NUMBER OF LINES IN THE DATA FILE: 820

NUMBER OF CATEGORICAL-RESPONSE ITEMS: 13

NUMBER OF CONTINUOUS-RESPONSE ITEMS, AND/OR GROUPS: 0

TOTAL NUMBER OF "ITEMS" (INCLUDING GROUPS): 13

NUMBER OF CHARACTERS IN ID FIELDS: 3

MAXIMUM NUMBER OF RESPONSE-CODES FOR ANY ITEM: 5

THE MISSING VALUE CODE FOR CONTINUOUS DATA: 9.0000

THE DATA WILL BE STORED IN MEMORY

ESTIMATION PARAMETERS:

THE ITEMS WILL BE CALIBRATED--

BY MARGINAL MAXIMUM LIKELIHOOD ESTIMATION

MAXIMUM NUMBER OF EM CYCLES PERMITTED: 25



NUMBER OF PARAMETER-SEGMENTS USED IS: 13  
 NUMBER OF FREE PARAMETERS IS: 64  
 MAXIMUM NUMBER OF M-STEP ITERATIONS IS 4 TIMES  
 THE NUMBER OF PARAMETERS IN THE SEGMENT  
 THE M-STEP CONVERGENCE CRITERION IS: 0.000100  
 THE EM-CYCLE CONVERGENCE CRITERION IS: 0.001000  
 THE RK CONTROL PARAMETER (FOR THE M-STEPS) IS: 0.9000  
 THE RM CONTROL PARAMETER (FOR THE M-STEPS) IS: 1.0000  
 THE MAXIMUM ACCELERATION PERMITTED IS: 0.0000  
 THETA-GROUP LOCATIONS WILL REMAIN UNCHANGED  
 OUTPUT-CONTROL PARAMETERS  
 THE ITEM PARAMETERS WILL BE SAVED ON FILE <jobname>.PAR  
 QUADRATURE POINTS FOR MML,

ITEM SUMMARY

ITEM 1: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	1	1.16	(0.09)
B( 1)	2	-9.23	(****)
B( 2)	3	-6.58	(3.27)
B( 3)	4	-3.37	(0.27)
B( 4)	5	1.74	(0.13)

ITEM 2: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	6	1.20	(0.10)
B( 1)	7	-9.15	(****)
B( 2)	8	-6.47	(3.23)
B( 3)	9	-2.95	(0.22)
B( 4)	10	1.91	(0.13)

ITEM 3: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	11	1.08	(0.08)
B( 1)	12	-9.55	(****)
B( 2)	13	-6.29	(2.35)

B( 3) 14 -2.81 (0.23)

B( 4) 15 1.92 (0.15)

ITEM 4: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 16 1.31 (0.10)

B( 1) 17 -8.90 (\*\*\*\*)

B( 2) 18 -5.75 (1.57)

B( 3) 19 -3.33 (0.22)

B( 4) 20 1.05 (0.12)

ITEM 5: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 21 1.23 (0.09)

B( 1) 22 -7.33 (1.17)

B( 2) 23 -6.76 (0.85)

B( 3) 24 -2.91 (0.20)

B( 4) 25 1.41 (0.12)

ITEM 6: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 26 1.44 (0.12)

B( 1) 27 -8.64 (\*\*\*\*)

B( 2) 28 -6.26 (3.18)

B( 3) 29 -3.02 (0.19)

B( 4) 30 1.53 (0.11)

ITEM 7: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 31 1.11 (0.08)

B( 1) 32 -9.38 (\*\*\*\*)

B( 2) 33 -6.71 (3.33)

B( 3) 34 -3.29 (0.26)

B( 4) 35 1.51 (0.13)

ITEM 8: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 36 1.54 (0.11)

B( 1) 37 -8.71 (\*\*\*\*)

B( 2) 38 -5.47 (1.19)

B( 3) 39 -3.00 (0.18)

B( 4) 40 1.47 (0.11)

ITEM 9: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 41 1.50 (0.12)

B( 1) 42 -8.75 (\*\*\*\*)

B( 2) 43 -5.89 (2.14)

B( 3) 44 -2.99 (0.18)

B( 4) 45 1.61 (0.11)

ITEM 10: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 46 1.14 (0.08)

B( 1) 47 -9.34 (\*\*\*\*)

B( 2) 48 -6.63 (3.62)

B( 3) 49 -3.17 (0.27)

B( 4) 50 1.65 (0.14)

ITEM 11: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 51 0.96 (0.08)

B( 1) 52 -8.74 (\*\*\*\*)

B( 2) 53 -7.84 (8.43)

B( 3) 54 -3.77 (0.41)

B( 4) 55 1.51 (0.14)

ITEM 12: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 56 0.89 (0.08)

B( 1) 57 -9.89 (\*\*\*\*)

B( 2) 58 -7.55 (5.27)

B( 3) 59 -3.30 (0.33)

B( 4) 60 1.99 (0.17)

ITEM 13: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 61 1.03 (0.08)

B( 1) 62 -8.97 (\*\*\*\*)

B( 2) 63 -7.81 (9.31)

B( 3) 64 -3.89 (0.40)

B( 4) 65 1.39 (0.00)

NEGATIVE TWICE THE LOGLIKELIHOOD= -2341.3

(CHI-SQUARE FOR SEVERAL TIMES MORE EXAMINEES THAN CELLS)

NORMAL PROGRAM TERMINATION

START DATE: 03-03-2013

START TIME: 21:04:00

END TIME: 21:04:00

ผลการวิเคราะห์อำนาจจำแนกอำนาจจำแนกของมาตรวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนา  
เด็กเล็กโดยการประมาณค่าพารามิเตอร์ความชันร่วมของมาตรวัด ( $\alpha_i$ ) ด้านจิตสร้างสรรค์  
(แสดงในส่วนสำคัญ)

MULTILOG--FOR MULTIPLE CATEGORICAL ITEM RESPONSE DATA--VERSION

7.0.3

DATA PARAMETERS:

NUMBER OF LINES IN THE DATA FILE: 820

NUMBER OF CATEGORICAL-RESPONSE ITEMS: 14

NUMBER OF CONTINUOUS-RESPONSE ITEMS, AND/OR GROUPS: 0

TOTAL NUMBER OF "ITEMS" (INCLUDING GROUPS): 14

NUMBER OF CHARACTERS IN ID FIELDS: 3

MAXIMUM NUMBER OF RESPONSE-CODES FOR ANY ITEM: 5

THE MISSING VALUE CODE FOR CONTINUOUS DATA: 9.0000

THE DATA WILL BE STORED IN MEMORY

ESTIMATION PARAMETERS:

THE ITEMS WILL BE CALIBRATED--

BY MARGINAL MAXIMUM LIKELIHOOD ESTIMATION

MAXIMUM NUMBER OF EM CYCLES PERMITTED: 25

NUMBER OF PARAMETER-SEGMENTS USED IS: 14

NUMBER OF FREE PARAMETERS IS: 69

MAXIMUM NUMBER OF M-STEP ITERATIONS IS 4 TIMES

THE NUMBER OF PARAMETERS IN THE SEGMENT

THE M-STEP CONVERGENCE CRITERION IS: 0.000100

THE EM-CYCLE CONVERGENCE CRITERION IS: 0.001000

THE RK CONTROL PARAMETER (FOR THE M-STEPS) IS: 0.9000

THE RM CONTROL PARAMETER (FOR THE M-STEPS) IS: 1.0000

THE MAXIMUM ACCELERATION PERMITTED IS: 0.0000

THETA-GROUP LOCATIONS WILL REMAIN UNCHANGED

OUTPUT-CONTROL PARAMETERS

THE ITEM PARAMETERS WILL BE SAVED ON FILE <jobname>.PAR

ITEM SUMMARY

ITEM 1: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A	1	0.98	(0.07)
B( 1)	2	-9.67	(****)
B( 2)	3	-7.71	(5.81)
B( 3)	4	-3.53	(0.33)
B( 4)	5	1.45	(0.15)

## ITEM 2: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A	6	0.91	(0.07)
B( 1)	7	-8.13	(1.27)
B( 2)	8	-6.91	(0.77)
B( 3)	9	-3.44	(0.26)
B( 4)	10	1.37	(0.15)

## ITEM 3: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A	11	1.20	(0.09)
B( 1)	12	-9.22	(****)
B( 2)	13	-7.49	(8.86)
B( 3)	14	-3.18	(0.23)
B( 4)	15	1.45	(0.13)

## ITEM 4: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A	16	1.19	(0.00)
B( 1)	17	-1.39	(0.00)
B( 2)	18	-23.04	(0.00)
B( 3)	19	-3.83	(0.00)
B( 4)	20	1.32	(0.00)

## ITEM 5: 5 GRADED CATEGORIES

## P(#) ESTIMATE (S.E.)

A	21	1.34	(0.11)
B( 1)	22	-8.80	(****)
B( 2)	23	-7.09	(7.03)

B( 3) 24 -3.71 (0.25)

B( 4) 25 1.31 (0.12)

ITEM 6: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 26 0.95 (0.08)

B( 1) 27 -9.32 (\*\*\*\*)

B( 2) 28 -8.25 (\*\*\*\*)

B( 3) 29 -3.97 (0.43)

B( 4) 30 1.13 (0.14)

ITEM 7: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 31 0.97 (0.07)

B( 1) 32 -9.64 (\*\*\*\*)

B( 2) 33 -7.36 (4.64)

B( 3) 34 -3.99 (0.41)

B( 4) 35 0.74 (0.14)

ITEM 8: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 36 1.31 (0.09)

B( 1) 37 -8.74 (\*\*\*\*)

B( 2) 38 -6.35 (2.59)

B( 3) 39 -3.48 (0.25)

B( 4) 40 0.84 (0.12)

ITEM 9: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 41 1.23 (0.09)

B( 1) 42 -9.07 (\*\*\*\*)

B( 2) 43 -6.85 (3.83)

B( 3) 44 -3.08 (0.22)

B( 4) 45 1.46 (0.13)

ITEM 10: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 46 0.95 (0.07)

B( 1) 47 -9.74 (\*\*\*\*)

B( 2) 48 -6.73 (2.45)

B( 3) 49 -2.41 (0.23)

B( 4) 50 1.95 (0.18)

ITEM 11: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 51 0.85 (0.06)

B( 1) 52 -10.08 (\*\*\*\*)

B( 2) 53 -7.57 (3.98)

B( 3) 54 -2.67 (0.27)

B( 4) 55 1.94 (0.19)

ITEM 12: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 56 0.61 (0.06)

B( 1) 57 -8.99 (1.29)

B( 2) 58 -6.47 (0.75)

B( 3) 59 -2.53 (0.31)

B( 4) 60 2.57 (0.27)

ITEM 13: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 61 1.02 (0.08)

B( 1) 62 -9.69 (\*\*\*\*)

B( 2) 63 -7.14 (3.94)

B( 3) 64 -3.30 (0.28)

B( 4) 65 1.41 (0.15)

ITEM 14: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 66 1.14 (0.08)

B( 1) 67 -7.79 (1.38)

B( 2) 68 -6.54 (0.73)

B( 3) 69 -3.38 (0.23)

B( 4) 70 1.39 (0.00)



NEGATIVE TWICE THE LOGLIKELIHOOD= 43.4  
 (CHI-SQUARE FOR SEVERAL TIMES MORE EXAMINEES THAN CELLS)

NORMAL PROGRAM TERMINATION

START DATE: 03-03-2013

START TIME: 21:06:15

END TIME: 21:06:15

ผลการวิเคราะห์อำนาจจำแนกอำนาจจำแนกของมาตรวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนา  
 เด็กเล็กโดยการประมาณค่าพารามิเตอร์ความชันร่วมของมาตรวัด ( $\alpha_i$ ) ด้านจิตรู้เคารพ (แสดง  
 ในส่วนสำคัญ)

MULTILOG--FOR MULTIPLE CATEGORICAL ITEM RESPONSE DATA--VERSION

7.0.3

DATA PARAMETERS:

NUMBER OF LINES IN THE DATA FILE: 820

NUMBER OF CATEGORICAL-RESPONSE ITEMS: 14

NUMBER OF CONTINUOUS-RESPONSE ITEMS, AND/OR GROUPS: 0

TOTAL NUMBER OF "ITEMS" (INCLUDING GROUPS): 14

NUMBER OF CHARACTERS IN ID FIELDS: 3

MAXIMUM NUMBER OF RESPONSE-CODES FOR ANY ITEM: 5

THE MISSING VALUE CODE FOR CONTINUOUS DATA: 9.0000

THE DATA WILL BE STORED IN MEMORY

ESTIMATION PARAMETERS:

THE ITEMS WILL BE CALIBRATED--

BY MARGINAL MAXIMUM LIKELIHOOD ESTIMATION

MAXIMUM NUMBER OF EM CYCLES PERMITTED: 25

NUMBER OF PARAMETER-SEGMENTS USED IS: 14

NUMBER OF FREE PARAMETERS IS: 69

MAXIMUM NUMBER OF M-STEP ITERATIONS IS 4 TIMES

THE NUMBER OF PARAMETERS IN THE SEGMENT

THE M-STEP CONVERGENCE CRITERION IS: 0.000100

THE EM-CYCLE CONVERGENCE CRITERION IS: 0.001000

THE RK CONTROL PARAMETER (FOR THE M-STEPS) IS: 0.9000

THE RM CONTROL PARAMETER (FOR THE M-STEPS) IS: 1.0000

THE MAXIMUM ACCELERATION PERMITTED IS: 0.0000

THETA-GROUP LOCATIONS WILL REMAIN UNCHANGED

OUTPUT-CONTROL PARAMETERS

ITEM SUMMARY

ITEM 1: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 1 1.18 (0.08)

B( 1) 2 -6.72 (0.95)

B( 2) 3 -5.89 (0.64)

B( 3) 4 -3.44 (0.27)

B( 4) 5 1.39 (0.13)

ITEM 2: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 6 1.20 (0.09)

B( 1) 7 -7.20 (1.21)

B( 2) 8 -5.98 (0.63)

B( 3) 9 -2.58 (0.20)

B( 4) 10 1.77 (0.13)

ITEM 3: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 11 1.47 (0.11)

B( 1) 12 -6.58 (0.99)

B( 2) 13 -6.07 (0.73)

B( 3) 14 -2.77 (0.21)

B( 4) 15 1.34 (0.11)

ITEM 4: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 16 1.61 (0.13)

B( 1) 17 -6.33 (0.90)

B( 2) 18 -5.87 (0.66)

B( 3) 19 -2.79 (0.20)

B( 4) 20 1.46 (0.10)

ITEM 5: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 21 1.66 (0.13)

B( 1) 22 -8.06 (\*\*\*\*)

B( 2) 23 -5.81 (2.15)

B( 3) 24 -2.74 (0.19)

B( 4) 25 1.37 (0.10)

ITEM 6: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 26 1.55 (0.11)

B( 1) 27 -8.34 (\*\*\*\*)

B( 2) 28 -5.96 (2.78)

B( 3) 29 -2.90 (0.22)

B( 4) 30 1.10 (0.10)

ITEM 7: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 31 1.66 (0.13)

B( 1) 32 -6.24 (0.88)

B( 2) 33 -5.79 (0.65)

B( 3) 34 -2.82 (0.18)

B( 4) 35 1.37 (0.11)

ITEM 8: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 36 1.33 (0.10)

B( 1) 37 -6.87 (1.16)

B( 2) 38 -6.00 (0.70)

B( 3) 39 -2.51 (0.19)

B( 4) 40 1.49 (0.12)

ITEM 9: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 41 1.74 (0.14)

B( 1) 42 -6.15 (0.84)

B( 2) 43 -5.72 (0.62)

B( 3) 44 -2.86 (0.19)

B( 4) 45 1.47 (0.10)

ITEM 10: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 46 1.38 (0.10)

B( 1) 47 -6.24 (0.79)

B( 2) 48 -5.52 (0.56)

B( 3) 49 -2.46 (0.19)

B( 4) 50 1.74 (0.12)

ITEM 11: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 51 1.37 (0.11)

B( 1) 52 -6.25 (0.95)

B( 2) 53 -5.72 (0.68)

B( 3) 54 -2.68 (0.22)

B( 4) 55 1.69 (0.13)

ITEM 12: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 56 1.14 (0.09)

B( 1) 57 -9.06 (\*\*\*\*)

B( 2) 58 -7.36 (7.94)

B( 3) 59 -3.18 (0.29)

B( 4) 60 1.59 (0.13)

## ITEM 13: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 61 1.21 (0.00)

B( 1) 62 -1.39 (0.00)

B( 2) 63 -17.93 (0.00)

B( 3) 64 -2.90 (0.00)

B( 4) 65 1.80 (0.00)

## ITEM 14: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 66 1.40 (0.10)

B( 1) 67 -8.41 (\*\*\*\*)

B( 2) 68 -6.16 (2.87)

B( 3) 69 -2.99 (0.22)

B( 4) 70 1.39 (0.00)

NORMAL PROGRAM TERMINATION

START DATE: 03-03-2013

START TIME: 21:07:39

END TIME: 21:07:39

ผลการวิเคราะห์อำนาจจำแนกอำนาจจำแนกของมาตรวัดวัดสมรรถนะครูปฐมวัยของศูนย์พัฒนา  
เด็กเล็กโดยการประมาณค่าพารามิเตอร์ความชันร่วมของมาตรวัด ( $\alpha_i$ ) ด้านจิตู้จริยธรรม  
(แสดงในส่วนสำคัญ)

MULTILOG--FOR MULTIPLE CATEGORICAL ITEM RESPONSE DATA--  
VERSION 7.0.3

DATA PARAMETERS:

NUMBER OF LINES IN THE DATA FILE: 820

NUMBER OF CATEGORICAL-RESPONSE ITEMS: 18

NUMBER OF CONTINUOUS-RESPONSE ITEMS, AND/OR GROUPS: 0

TOTAL NUMBER OF "ITEMS" (INCLUDING GROUPS): 18

NUMBER OF CHARACTERS IN ID FIELDS: 3

MAXIMUM NUMBER OF RESPONSE-CODES FOR ANY ITEM: 5

THE MISSING VALUE CODE FOR CONTINUOUS DATA: 9.0000

THE DATA WILL BE STORED IN MEMORY

ESTIMATION PARAMETERS:

THE ITEMS WILL BE CALIBRATED--

BY MARGINAL MAXIMUM LIKELIHOOD ESTIMATION

MAXIMUM NUMBER OF EM CYCLES PERMITTED: 25

NUMBER OF PARAMETER-SEGMENTS USED IS: 18

NUMBER OF FREE PARAMETERS IS: 89

MAXIMUM NUMBER OF M-STEP ITERATIONS IS 4 TIMES

THE NUMBER OF PARAMETERS IN THE SEGMENT

THE M-STEP CONVERGENCE CRITERION IS: 0.000100

THE EM-CYCLE CONVERGENCE CRITERION IS: 0.001000

THE RK CONTROL PARAMETER (FOR THE M-STEPS) IS: 0.9000

THE RM CONTROL PARAMETER (FOR THE M-STEPS) IS: 1.0000

THE MAXIMUM ACCELERATION PERMITTED IS: 0.0000

THETA-GROUP LOCATIONS WILL REMAIN UNCHANGED  
 OUTPUT-CONTROL PARAMETERS  
 THE ITEM PARAMETERS WILL BE SAVED ON FILE <jobname>.PAR  
 ITEM SUMMARY

ITEM 1: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	1	1.14	(0.00)
B( 1)	2	-1.39	(0.00)
B( 2)	3	-18.73	(0.00)
B( 3)	4	-3.15	(0.00)
B( 4)	5	1.13	(0.00)

ITEM 2: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	6	1.10	(0.09)
B( 1)	7	-7.07	(1.47)
B( 2)	8	-6.06	(0.94)
B( 3)	9	-3.01	(0.29)
B( 4)	10	1.42	(0.13)

ITEM 3: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	11	1.05	(0.08)
B( 1)	12	-6.24	(0.97)
B( 2)	13	-5.40	(0.71)
B( 3)	14	-3.06	(0.33)
B( 4)	15	1.30	(0.14)

ITEM 4: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A	16	1.27	(0.10)
B( 1)	17	-8.40	(****)

B( 2) 18 -6.42 (6.31)

B( 3) 19 -2.93 (0.29)

B( 4) 20 1.22 (0.11)

ITEM 5: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 21 1.30 (0.00)

B( 1) 22 -1.39 (0.00)

B( 2) 23 -19.47 (0.00)

B( 3) 24 -2.75 (0.00)

B( 4) 25 1.66 (0.00)

ITEM 6: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 26 1.75 (0.15)

B( 1) 27 -8.07 (\*\*\*\*)

B( 2) 28 -5.16 (1.41)

B( 3) 29 -2.65 (0.18)

B( 4) 30 1.54 (0.10)

ITEM 7: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 31 1.21 (0.10)

B( 1) 32 -8.65 (\*\*\*\*)

B( 2) 33 -6.05 (3.39)

B( 3) 34 -2.53 (0.25)

B( 4) 35 2.18 (0.13)

ITEM 8: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 36 1.48 (0.12)

B( 1) 37 -8.19 (\*\*\*\*)

B( 2) 38 -5.99 (4.48)



B( 3) 39 -2.53 (0.20)  
 B( 4) 40 1.71 (0.11)  
 ITEM 9: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 41 1.41 (0.11)  
 B( 1) 42 -7.79 (\*\*\*\*)  
 B( 2) 43 -6.15 (4.33)  
 B( 3) 44 -2.60 (0.23)  
 B( 4) 45 1.77 (0.12)

ITEM 10: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 46 1.18 (0.09)  
 B( 1) 47 -8.58 (\*\*\*\*)  
 B( 2) 48 -6.14 (3.47)  
 B( 3) 49 -2.45 (0.27)  
 B( 4) 50 2.15 (0.14)

ITEM 11: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 51 1.30 (0.00)  
 B( 1) 52 -1.39 (0.00)  
 B( 2) 53 -17.64 (0.00)  
 B( 3) 54 -2.60 (0.00)  
 B( 4) 55 1.90 (0.00)

ITEM 12: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 56 1.74 (0.15)  
 B( 1) 57 -7.79 (\*\*\*\*)  
 B( 2) 58 -5.66 (3.52)  
 B( 3) 59 -2.60 (0.21)

B( 4) 60 1.68 (0.09)

ITEM 13: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 61 1.69 (0.14)

B( 1) 62 5.62 (\*\*\*\*)

B( 2) 63 -8.24 (\*\*\*\*)

B( 3) 64 -2.40 (0.20)

B( 4) 65 1.66 (0.10)

ITEM 14: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 66 1.70 (0.15)

B( 1) 67 -7.87 (\*\*\*\*)

B( 2) 68 -5.23 (1.54)

B( 3) 69 -2.60 (0.20)

B( 4) 70 1.61 (0.10)

ITEM 15: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 71 1.84 (0.14)

B( 1) 72 -7.67 (\*\*\*\*)

B( 2) 73 -5.56 (3.13)

B( 3) 74 -2.60 (0.22)

B( 4) 75 1.55 (0.10)

ITEM 16: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 76 1.75 (0.00)

B( 1) 77 -1.39 (0.00)

B( 2) 78 -18.38 (0.00)

B( 3) 79 -2.59 (0.00)

B( 4) 80 1.45 (0.00)

## ITEM 17: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 81 2.29 (0.00)

B( 1) 82 -1.39 (0.00)

B( 2) 83 -14.39 (0.00)

B( 3) 84 -2.74 (0.00)

B( 4) 85 1.52 (0.00)

## ITEM 18: 5 GRADED CATEGORIES

P(#) ESTIMATE (S.E.)

A 86 1.87 (0.15)

B( 1) 87 -7.62 (\*\*\*\*)

B( 2) 88 -5.53 (2.95)

B( 3) 89 -2.65 (0.20)

B( 4) 90 1.39 (0.00)

NORMAL PROGRAM TERMINATION

START DATE: 03-03-2013

START TIME: 21:09:31

END TIME: 21:09:31