AACTE 2005 Symposium

Analysis of Disposition Measures of Consistency With ITASC Principles: Results of an Initial Study

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Statement of the Problem

This short presentation reports the analysis of the results from a pilot effort to create and use a battery of instruments based on INTASC principles indicators of teacher dispositions. The original conception of the battery was designed on the taxonomy of increasing levels of inference. This means that the intent to measure included multiple instruments in order that confidence in the assessment was greater than typically found in cognitive tests. For example, if a teacher passes a teacher certification test once by correctly answering pedagogy and content questions, there is an assumption that the teacher candidate knows and can do the material on the test. Obviously, guesses, cheating, and simply knowing (but not willingness to do) are all threats to the confidence that the test taker possesses the knowledge and skills referenced.

In the areas of affective assessment there is always the possibility that someone would self-report what was "expected", but not what they really believed or behaved, so confidence that the assessment has value as a true score of the person tested is important. There are several ways to gain confidence in affective assessment. One is to design instruments that "pull" beliefs and values from the test takers where faking is difficult and detectable. This is achieved by making questions in formats that have dissonance such as agree-disagree statements, questions which require specificity so that fake answers are spotted, and observations of behaviour consistent with beliefs. Multiple measures with different item types are the best way to gain the confidence we seek.

Also, there are some issues of assessment illiteracy (and innumeracy) that are magnified with a focus on disposition instruments. For example, in the FAQ's on the web site for the American Board for the Certification of Teachers, one can find the following with italics added to emphasize points (American Board for Certification of Teacher Education, 2005):

> **"How can a series of exams sufficiently determine who is qualified to enter the classroom?**
> American Board exams are standards based in design and content, meaning that they focus on the essential elements teachers should know to impact student learning. They comprehensively *measure subject area knowledge as well as "hands on" teaching knowledge*. American Board exams *are not easy – but that is what makes them a valid indicator of teacher knowledge.* When an applicant passes the American Board exams, they are certified as "highly qualified" educators. Administrators and recruiters are then able to

hire American Board-certified teachers with the confidence that they are gaining the expertise of a knowledgeable educator.

Why is a field test necessary?

Exam questions are field-tested to determine which items perform best. Field-testing new items provides an opportunity to obtain statistical estimates of *item difficulty and item discrimination*—these two measures help the American Board determine an item's performance history and potential value. Items that perform well in the field test will be considered for selection when initial test forms are constructed. *Field-testing also provides the statistical information used to help determine the passing standard for the test*. Approximately 2,500 individuals participated in the American Board field tests administered in the Summer and Fall of 2003. Once the field tests are completed, *automated test assembly techniques are used to construct the initial test forms that are parallel in content and statistical characteristics."*

Bluntly, something is not valid because it's difficult; nor is it difficult because it is valid. Also, the test described above infers that knowledgeable teachers are effective and highly qualified, while INTASC recognized years ago that teacher candidates without appropriate dispositions were often less than qualified, regardless of knowledge alone. If a teacher does not believe in advocacy for their students or ethical actions, knowledge of anything won't fix their decisions or make them qualified. If one understands the standard they adhere to…then a competency point is visualized before instrument development, not decided on as arbitrary decision based on non-standard influences or sample dependent field tests. If a child predator is not a proper disposition for teaching, what field test would help us decide something else? If standards are truly available and relevant – then it's an a priori decision to adhere to a "passing score". Finally, since this discussion involves new assessment development, it's clear that good assessment today recognizes the alignment of multiple item types and levels of inference in order to have confidence in the interpretation of results, and statistically parallel forms are not a substitute for confidence in the scores.

A Battery of Assessments: Measurement Theory Applied

The Assessments described here represent initial data from a series of instruments possible from less to more inference in the item types:

Less Inference			**More Inference**
Agree-Disagree Forced-Choice	***Questionnaire with Essay Answers***	***Focus Group with Kids***	
Likert Response	Behavioral Checklist (Filled out by	Interview with Teacher Candidate	Abstract Projective (Ink Blot, etc.)

	Peers)		
Historical Record (Fingerprint, etc.)	Scenario Analysis Essay Answers	Observation in Field	Trait Analysis of Handwriting, Verbals

The assessments highlighted above are the ones that are the subject of this report and analysis. Some of the others have been drafted or will be used in the future. All the instruments are measures of constructs that derive from the INTASC principles for Dispositions. All items are intended to measure the same constructs along a continuum of more to less of the dispositions defined in the principles. All item types are intended to calibrate on a ruler created using probabilistic conjoint scores estimated with the Rasch model.

More simply put, if a person was to pick up a rock, the ability to do so would be a conjoint function of both the *weight of the rock AND the strength of the person.* Given the imaginary unit "pounds", we could both assign a value to the mass to some rocks (ie. 8 pounds) and the strength ability of some persons (ie. 20 pounds). If the weight of the rock lifting attempt is less than the ability of the person, it is likely (probable) that the person can lift the rock or vice versa. Meanwhile, we could use multiple "items" or "rocks" to estimate pounds as applied to the rocks, but our imaginary pounds are defined as unchanging units. If multiple attempts give the same "pound" estimate for the rock the person holds during the lifting attempt, we gain confidence in the instruments and simultaneously, the estimate of the person's ability. It we have estimates of many person abilities, and they attempt to lift a number of different rocks, we also gain confidence in our ability estimates when attempts are consistent with our pound estimates of the rocks. The iterative process of estimates by scales and persons with repeated trials allows the precise estimate of a pound and the ability of the persons. For a comprehensive look at the methodology used here, see *Introduction to Rasch Measurement: Theory, Models and Applications* (Smith & Smith, 2004).

In our case, we are estimating disposition consistency with the INTASC principles. The instrument items are collections of "rocks" that our people attempt to "lift" (get right). We measure both the people and the items on the same rule of more to less of the disposition construct.

Some Results

Given this is a short paper for 1/6th of a Symposium, all that is reported here are some highlighted and interesting results from the pilot as nothing but the opinion of this author as a guide for the choices! Since others have targeted the individual results, I'm going to focus on some possible program and unit improvements.

TABLE 3.1 DispositionScaleSRaschAnalysis ZOU638ws.txt Feb 17 18:40 2005
INPUT: 801 persons, 75 items MEASURED: 801 persons, 65 items, 8 CATS 3.49

SUMMARY OF 801 MEASURED persons

	RAW SCORE	COUNT	MEASURE	MODEL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	32.7	43.5	57.12	4.00	1.00	.0	.96	.0
S.D.	8.1	7.6	7.15	.62	.19	1.0	.36	.9
MAX.	54.0	52.0	76.98	7.52	2.05	4.9	3.80	5.3
MIN.	3.0	7.0	32.42	3.03	.32	-3.4	.33	-2.5
REAL RMSE	4.17	ADJ.SD	5.81	SEPARATION	1.39	person RELIABILITY	.66	
MODEL RMSE	4.04	ADJ.SD	5.90	SEPARATION	1.46	person RELIABILITY	.68	
S.E. OF person MEAN = .25								

VALID RESPONSES: 67.9%

These should be 1.0, so the values reported here are good for our set of items.

SUMMARY OF 64 MEASURED items

	RAW SCORE	COUNT	MEASURE	MODEL ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD
MEAN	408.9	544.2	50.00	2.41	1.12	.0	1.09	-.1
S.D.	255.1	319.8	18.76	4.34	1.15	2.3	1.17	2.5
MAX.	757.0	776.0	106.53	31.46	9.90	6.4	9.90	5.6
MIN.	3.0	3.0	15.90	.76	.01	-6.0	.01	-6.0

REAL RMSE	12.80	ADJ.SD	13.72	SEPARATION	1.07	item	RELIABILITY	.53
MODEL RMSE	4.97	ADJ.SD	18.09	SEPARATION	3.64	item	RELIABILITY	.93

S.E. OF item MEAN = 2.36

MINIMUM EXTREME SCORE: 1 items
DELETED: 10 items
UMEAN=50.000 USCALE=10.000

We kept 65 of 75 original items from the three instruments and removed 10. One item was dropped by Rasch because it didn't measure anything.

This figure is simply verification that the overall process has the characteristics we expect.

TABLE 14.1 DispositionScaleSRaschAnalysis ZOU638ws.txt Feb 17 18:40 2005
INPUT: 801 persons, 75 items MEASURED: 801 persons, 65 items, 8 CATS 3.49

person: REAL SEP.: 1.39 REL.: .66 ... item: REAL SEP.: 1.07 REL.: .53

items STATISTICS: ENTRY ORDER

ENTRY NUMBER	RAW SCORE	COUNT	MEASURE	ERROR	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PTMEA CORR.	items	G
1	747	771	20.18	2.10	.98	-.1	.95	-.1	.16	BELIEF 1 HOME LIFE	B
2	DELETED									BELIEF 2 LESSONS ARE ALL THEY NEED	B
3	757	773	15.90	2.55	.95	-.1	.59	-1.4	.23	BELIEF 3 STUDENT BACKGROUNDS	B
4	DELETED									BELIEF 4 TEACH THE SUBJECT	B
5	DELETED									BELIEF 5 FACILITY RESPONSIBILITY	B
6	753	776	19.66	2.14	.93	-.3	.50	-2.3	.29	BELIEF 6 ADAPTING TO LEARNING STYLE	B
7	DELETED									BELIEF 7 TEST FOR GRADING	B
8	674	769	35.57	1.13	1.08	1.0	1.24	2.1	.10	BELIEF 8 BACK TO BASICS	B
9	724	775	28.27	1.48	.98	-.1	.90	-.6	.22	BELIEF 9 VARIETY OF LEARNING STYLES	B
10	730	773	26.41	1.60	.99	.0	.84	-.9	.21	BELIEF 10 MEANINGFUL TO STUDENTS	B
11	716	771	29.18	1.43	.99	.0	.88	-.8	.23	BELIEF 11 FOLLOW THE TEXTBOOK	B
12	626	769	40.74	.97	1.07	1.2	1.36	4.2	.10	BELIEF 12 WELL-MADE TEST IS FAIR	B
13	693	771	33.17	1.23	1.05	.5	1.15	1.2	.13	BELIEF 13 ASSESSMENT IS IMPORTANT	B
14	721	775	28.91	1.44	1.02	.2	.87	-.8	.20	BELIEF 14 DIFFERENT TYPES OF MEASURES	B
15	628	768	40.49	.97	1.07	1.2	1.09	1.2	.17	BELIEF 15 MANAGER OF BEHAVIOR	B
16	644	769	38.98	1.02	.96	-.7	.98	-.2	.30	BELIEF 16 MEANINGFUL LESSONS	B
17	DELETED									BELIEF 17 LIFE-LONG LEARNERS	B
18	653	770	38.20	1.04	.99	-.1	1.17	1.8	.21	BELIEF 18 VOLUNTEER FOR PTA	B
19	705	774	31.74	1.30	.88	-1.2	.67	-2.7	.40	BELIEF 19 SELF-CONFIDENCE	B
20	566	769	45.67	.86	1.08	1.8	1.15	2.6	.17	BELIEF 20 TEACHERS ARE STUDENTS	B
21	644	767	38.81	1.02	.98	-.3	.93	-.7	.29	BELIEF 21 PROPER ENGLISH	B
22	541	766	47.30	.83	1.09	2.3	1.15	3.0	.17	BELIEF 22 MAINTAIN STRUCTURE	B
23	695	766	32.15	1.28	.86	-1.4	.58	-3.8	.44	BELIEF 23 LEARNING TO THINK	B
24	692	774	33.74	1.20	.96	-.5	.83	-1.4	.30	BELIEF 24 SOLVE PROBLEMS	B
25	DELETED									BELIEF 25 LIKE A CERTAIN GRADE	B
26	660	766	36.95	1.08	1.01	.2	.91	-.9	.26	BELIEF 26 MEETING FAMILIES	B
27	562	768	45.95	.85	1.06	1.6	1.12	2.2	.20	BELIEF 27 INDIVIDUAL PLANNING	B
28	638	768	39.54	1.00	1.02	.3	.97	-.3	.26	BELIEF 28 SCARED OF PARENTS	B
29	516	753	48.33	.83	1.04	1.1	1.03	.6	.26	BELIEF 29 CREATIVITY IS IMPORTANT	B
30	611	768	42.02	.93	1.06	1.1	1.28	3.6	.16	BELIEF 30 OLD FASHIONED-SIT DOWN	B
31	637	768	39.63	1.00	1.06	1.0	1.04	.5	.19	BELIEF 31 PEER RECOGNITION	B
32	DELETED									BELIEF 32 KNOWLEDGE IS IMPORTANT	B
33	434	759	53.76	.77	1.13	5.3	1.16	5.1	.13	BELIEF 33 ART & MUSIC CREATIVITY	B
34	454	759	52.62	.78	1.09	3.4	1.09	2.6	.20	BELIEF 34 CHOICES FOR MOTIVATION	B
35	593	766	43.45	.90	1.02	.5	.93	-1.0	.29	BELIEF 35 ALL CHILDREN CAN LEARN	B
36	472	767	51.82	.78	.94	-2.1	.94	-1.9	.39	BELIEF 36 GREAT TALKER	B
37	449	765	53.18	.77	1.14	5.4	1.16	4.8	.13	BELIEF 37 LESSONS FOR COMMUNITY	B
38	367	764	57.88	.76	1.15	6.4	1.17	5.6	.12	BELIEF 38 REMOVE SOME KIDS	B
39	549	762	46.55	.85	.85	-4.1	.76	-5.0	.52	BELIEF 39 VALUES OF STUDENTS	B
40	531	759	47.66	.83	.99	-.3	.94	-1.3	.34	BELIEF 40 PROBLEMS FROM HOME	B
41	539	770	47.65	.83	.83	-5.0	.76	-5.5	.54	BELIEF 41 BRAINSTORMING WASTE	B
42	421	757	54.53	.77	1.00	.2	1.02	.8	.31	BELIEF 42 TIME ON TASK	B
43	514	768	49.21	.81	1.02	.5	.98	-.5	.30	BELIEF 43 PRACTICE QUESTIONS	B
44	335	765	59.81	.77	1.04	1.8	1.04	1.4	.26	BELIEF 44 ASSESSMENTS FOR CUTS	B
45	446	770	53.54	.77	.91	-3.8	.90	-3.3	.44	BELIEF 45 TEACH SELF-CONFIDENCE	B
46	479	766	51.37	.79	.84	-6.0	.80	-6.0	.53	BELIEF 46 SOCIALIZING IN SCHOOL	B
47	316	759	60.73	.77	.96	-1.5	.96	-1.2	.36	BELIEF 47 IMMIGRANTS AMERICAN WAY	B
48	422	765	54.75	.77	1.01	.6	1.05	1.9	.29	BELIEF 48 REALISTIC PERFORMANCE	B
49	265	757	63.87	.80	1.00	.2	1.05	1.3	.28	BELIEF 49 POINT OF VIEW	B
50	387	763	56.77	.76	.88	-5.9	.87	-5.0	.48	BELIEF 50 EXTERNAL CONTROL	B
51	74	85	64.64	1.69	.95	-.4	.94	-.4	.46	QUESTIONNAIRE 1 PROFESSIONAL IMPROVEMENT	Q
52	86	85	61.25	1.68	1.00	.0	.99	.0	.43	QUESTIONNAIRE 2 PROFESSIONAL COLLABORATION	Q

53	91	85	59.84	1.68	.78	-1.9	.78	-1.9	.49	QUESTIONNAIRE 3 REWARDING BEHAVIOR	Q
54	88	84	60.45	1.69	.78	-1.9	.77	-1.9	.50	QUESTIONNAIRE 4 VALUE COMMUNITY & WORKING TOGETHER	Q
55	90	84	59.69	1.69	1.02	.2	1.02	.2	.43	QUESTIONNAIRE 5 PLANNING	Q
56	79	83	62.58	1.70	.86	-1.1	.90	-.8	.40	QUESTIONNAIRE 6 ASSESSMENTS FOR DECISIONS	Q
57	59	82	68.25	1.77	.83	-1.3	.84	-1.2	.43	QUESTIONNAIRE 7 LESSONS THAT DIDN'T WORK	Q
58	97	79	55.77	1.78	1.23	1.7	1.20	1.5	.45	QUESTIONNAIRE 8 COLLABORATE ABOUT A STUDENT	Q
59	25	19	25.74	5.13	2.78	5.9	3.12	5.1	.42	FOCUS 1 GROUP WORK TO FOSTER GROWTH	F
60	6	3	-9.19	19.98	MINIMUM ESTIMATED MEASURE					FOCUS 2 RESPONSIVE LISTENER	F
61	4	3	24.95	13.23	.59	-.8	.49	-.4	.77	FOCUS 3 ENTHUSIASTIC & KNOWLEDGEABLE	F
62	3	3	60.41	31.46	9.90	2.7	9.90	2.5	.99	FOCUS 4 KNOWLEDGE AS EVERYDAY LIFE	F
63	4	3	24.95	13.23	1.29	.7	1.07	.4	.16	FOCUS 5 FEEDBACK AND SUPPORT	F
64	DELETED									FOCUS 6 RESPECTS DIFFERENCES	F
65	121	127	75.24	3.96	.87	-.3	.77	-.5	.17	BELIEF FU 51 STANDARDS FOR PLANNING	F
66	129	131	67.03	5.06	.47	-1.2	.39	-1.4	.19	BELIEF FU 52 HELP FROM COLLEAGUES	F
67	DELETED									BELIEF FU 53 ALIGN C.I. & ASSESSMENT	F
68	129	130	64.36	5.32	.24	-2.0	.08	-3.1	.33	BELIEF FU 54 MODEL RESPECT	F
69	122	129	76.58	3.74	.88	-.3	.70	-.8	.24	BELIEF FU 55 SPUR OF MOMENT DECISIONS	F
70	119	130	81.25	3.13	.97	.0	.88	-.3	.18	BELIEF FU 56 TEACHER'S IN CONTROL	F
71	72	127	102.99	1.84	.98	-.4	.99	-.2	.28	BELIEF FU 57 STANDARDS ARE ALL NEEDED	F
72	DELETED									BELIEF FU 58 PROFESSIONAL ETHICS	F
73	131	131	61.47	5.40	.01	-4.4	.01	-4.4	.00	BELIEF FU 59 LISTEN TO SUGGESTIONS	F
74	60	124	106.53	1.85	1.00	.0	1.00	-.1	.24	BELIEF FU 60 STANDARDS HURT CREATIVITY	F
75	81	125	99.40	1.93	1.01	.2	1.02	.3	.22	BELIEF FU 61 RULES ARE NOT ABSOLUTES	F
MEAN	409.	544.	50.00	2.41	1.12	.0	1.09	-.1			
S.D.	255.	320.	18.76	4.34	1.15	2.3	1.17	2.5			

Here we have the items and their individual characteristics followed by a short phrase naming the item.

TABLE 30.2 DispositionScaleSRaschAnalysis ZOU638ws.txt Feb 17 18:40 2005
INPUT: 801 persons, 75 items MEASURED: 801 persons, 65 items, 8 CATS 3.49

ALL REFERENCES TO INSTITUTIONS AND PROGRAMS ARE RANDOMLY MISIDENTIFIED! NORMATIVE (COMPARATIVE VIEW) OF DISPOSITIONS

Positive DIF size is higher item difficulty measure

person GROUP	DIF MEASURE	DIF S.E.	item Number	Name
1	**16.37**	2.84	1	BELIEF 1 HOME LIFE
3	**29.07**	3.89	1	BELIEF 1 HOME LIFE
2	**25.64**	5.11	1	BELIEF 1 HOME LIFE
1	16.33	2.84	3	BELIEF 3 STUDENT BACKGROUNDS
3	9.01	10.04	3	BELIEF 3 STUDENT BACKGROUNDS
2	18.49	7.15	3	BELIEF 3 STUDENT BACKGROUNDS
1	19.72	2.43	6	BELIEF 6 ADAPTING TO LEARNING STYLE
3	16.03	7.13	6	BELIEF 6 ADAPTING TO LEARNING STYLE
2	22.66	5.87	6	BELIEF 6 ADAPTING TO LEARNING STYLE
1	26.34	1.84	8	BELIEF 8 BACK TO BASICS
3	41.26	2.39	8	BELIEF 8 BACK TO BASICS
2	53.76	1.95	8	BELIEF 8 BACK TO BASICS
1	24.87	1.95	9	BELIEF 9 VARIETY OF LEARNING STYLES
3	36.59	2.84	9	BELIEF 9 VARIETY OF LEARNING STYLES
2	33.02	3.69	9	BELIEF 9 VARIETY OF LEARNING STYLES
1	27.91	1.73	10	BELIEF 10 MEANINGFUL TO STUDENTS
3	9.07	10.04	10	BELIEF 10 MEANINGFUL TO STUDENTS
2	25.64	5.11	10	BELIEF 10 MEANINGFUL TO STUDENTS
1	29.58	1.62	11	BELIEF 11 FOLLOW THE TEXTBOOK
3	31.89	3.46	11	BELIEF 11 FOLLOW THE TEXTBOOK
2	18.69	7.15	11	BELIEF 11 FOLLOW THE TEXTBOOK
1	32.59	1.45	12	BELIEF 12 WELL-MADE TEST IS FAIR
3	57.48	1.69	12	BELIEF 12 WELL-MADE TEST IS FAIR
2	44.62	2.44	12	BELIEF 12 WELL-MADE TEST IS FAIR
1	30.59	1.56	13	BELIEF 13 ASSESSMENT IS IMPORTANT
3	33.88	3.16	13	BELIEF 13 ASSESSMENT IS IMPORTANT
2	43.05	2.54	13	BELIEF 13 ASSESSMENT IS IMPORTANT
1	29.55	1.62	14	BELIEF 14 DIFFERENT TYPES OF MEASURES
3	23.18	5.09	14	BELIEF 14 DIFFERENT TYPES OF MEASURES
2	29.92	4.22	14	BELIEF 14 DIFFERENT TYPES OF MEASURES
1	35.09	1.33	15	BELIEF 15 MANAGER OF BEHAVIOR
3	49.78	1.89	15	BELIEF 15 MANAGER OF BEHAVIOR
2	49.44	2.14	15	BELIEF 15 MANAGER OF BEHAVIOR
1	34.40	1.37	16	BELIEF 16 MEANINGFUL LESSONS
3	47.14	2.01	16	BELIEF 16 MEANINGFUL LESSONS

Here we can make any comparisons that are logical to our construct: we can look for bias by ethnic group, differences and similarities of institutions or programs within institutions, or contrasts with alternative certification or other important questions.

In this case, different groups have different levels of consistency with INTASC. This in not good or bad, but reflects the goals and types of students found in different units.

If a program wants to target a particular disposition as part of a CF; then we'd expect to see differences. Most colleges today don't have courses or programs to make differences in dispositions so we're still exploring.

Here, one institution has higher consistency with respect for family and home life than average. That's great, but why is up to the faculty at that program to decide?

2	46.95	2.25	16	BELIEF 16 MEANINGFUL LESSONS
1	**33.76**	**1.40**	18	BELIEF 18 VOLUNTEER FOR PTA
3	**46.11**	**2.05**	18	BELIEF 18 VOLUNTEER FOR PTA
2	**45.92**	**2.31**	18	BELIEF 18 VOLUNTEER FOR PTA
1	32.80	1.44	19	BELIEF 19 SELF-CONFIDENCE
3	20.48	5.85	19	BELIEF 19 SELF-CONFIDENCE
2	33.02	3.69	19	BELIEF 19 SELF-CONFIDENCE
1	38.45	1.21	20	BELIEF 20 TEACHERS ARE STUDENTS
3	56.86	1.69	20	BELIEF 20 TEACHERS ARE STUDENTS
2	56.86	1.89	20	BELIEF 20 TEACHERS ARE STUDENTS
1	35.65	1.31	21	BELIEF 21 PROPER ENGLISH
3	41.35	2.39	21	BELIEF 21 PROPER ENGLISH
2	48.84	2.17	21	BELIEF 21 PROPER ENGLISH
1	40.21	1.15	22	BELIEF 22 MAINTAIN STRUCTURE
3	59.49	1.69	22	BELIEF 22 MAINTAIN STRUCTURE
2	57.18	1.86	22	BELIEF 22 MAINTAIN STRUCTURE
1	34.51	1.37	23	BELIEF 23 LEARNING TO THINK
3	16.18	7.13	23	BELIEF 23 LEARNING TO THINK
2	22.66	5.87	23	BELIEF 23 LEARNING TO THINK
1	36.14	1.29	24	BELIEF 24 SOLVE PROBLEMS
3	20.23	5.85	24	BELIEF 24 SOLVE PROBLEMS
2	22.66	5.87	24	BELIEF 24 SOLVE PROBLEMS
1	**38.35**	**1.21**	26	BELIEF 26 MEETING FAMILIES
3	**35.42**	**3.05**	26	BELIEF 26 MEETING FAMILIES
2	**25.64**	**5.11**	26	BELIEF 26 MEETING FAMILIES
1	42.91	1.08	27	BELIEF 27 INDIVIDUAL PLANNING
3	58.35	1.70	27	BELIEF 27 INDIVIDUAL PLANNING
2	40.17	2.79	27	BELIEF 27 INDIVIDUAL PLANNING
1	40.46	1.15	28	BELIEF 28 SCARED OF PARENTS
3	38.45	2.68	28	BELIEF 28 SCARED OF PARENTS
2	34.31	3.50	28	BELIEF 28 SCARED OF PARENTS
1	44.66	1.05	29	BELIEF 29 CREATIVITY IS IMPORTANT
3	58.85	1.74	29	BELIEF 29 CREATIVITY IS IMPORTANT
2	50.34	2.11	29	BELIEF 29 CREATIVITY IS IMPORTANT
1	43.67	1.06	30	BELIEF 30 OLD FASHIONED-SIT DOWN
3	36.14	2.94	30	BELIEF 30 OLD FASHIONED-SIT DOWN
2	37.59	3.08	30	BELIEF 30 OLD FASHIONED-SIT DOWN
1	43.04	1.08	31	BELIEF 31 PEER RECOGNITION
3	16.42	7.13	31	BELIEF 31 PEER RECOGNITION
2	22.66	5.87	31	BELIEF 31 PEER RECOGNITION
1	**47.59**	**1.00**	33	BELIEF 33 ART & MUSIC CREATIVITY
3	**55.20**	**1.76**	33	BELIEF 33 ART & MUSIC CREATIVITY
2	**77.58**	**2.39**	33	BELIEF 33 ART & MUSIC CREATIVITY
1	49.33	.98	34	BELIEF 34 CHOICES FOR MOTIVATION

Why is one group much more likely to volunteer for the PTA than usual? In this case, it's not a program, but a different institution that reflects that value. Not that others are bad, but someone is doing something "right" if you think that willingness to volunteer for PTA projects reflects a desirable value!

Here a different institution has expressed more willingness to meet with families. What is a program doing to foster that disposition?

Here, the students at one institution reported that creative thinking was mostly up to the art & music classes, but not taught by all teachers. Is this a what most of us agree with, or is there an undesirable message coming through to the students?

3	58.73	1.69	34	BELIEF 34	CHOICES FOR MOTIVATION
2	58.17	1.88	34	BELIEF 34	CHOICES FOR MOTIVATION
1	47.82	1.00	35	BELIEF 35	ALL CHILDREN CAN LEARN
3	16.37	7.13	35	BELIEF 35	ALL CHILDREN CAN LEARN
2	11.55	10.06	35	BELIEF 35	ALL CHILDREN CAN LEARN
1	50.08	.97	36	BELIEF 36	GREAT TALKER
3	56.36	1.73	36	BELIEF 36	GREAT TALKER
2	53.56	1.95	36	BELIEF 36	GREAT TALKER
1	53.59	.95	37	BELIEF 37	LESSONS FOR COMMUNITY
3	59.72	1.69	37	BELIEF 37	LESSONS FOR COMMUNITY
2	38.80	2.98	37	BELIEF 37	LESSONS FOR COMMUNITY
1	52.42	.96	38	BELIEF 38	REMOVE SOME KIDS
3	68.27	1.79	38	BELIEF 38	REMOVE SOME KIDS
2	66.34	1.88	38	BELIEF 38	REMOVE SOME KIDS
1	50.73	.97	39	BELIEF 39	VALUES OF STUDENTS
3	29.61	3.90	39	BELIEF 39	VALUES OF STUDENTS
2	28.33	4.60	39	BELIEF 39	VALUES OF STUDENTS
1	51.20	.96	40	BELIEF 40	PROBLEMS FROM HOME
3	34.86	3.17	40	BELIEF 40	PROBLEMS FROM HOME
2	36.88	3.20	40	BELIEF 40	PROBLEMS FROM HOME
1	52.77	.95	41	BELIEF 41	BRAINSTORMING WASTE
3	25.81	4.57	41	BELIEF 41	BRAINSTORMING WASTE
2	18.49	7.15	41	BELIEF 41	BRAINSTORMING WASTE
1	54.75	.96	42	BELIEF 42	TIME ON TASK
3	49.78	1.91	42	BELIEF 42	TIME ON TASK
2	58.78	1.85	42	BELIEF 42	TIME ON TASK
1	54.29	.95	43	BELIEF 43	PRACTICE QUESTIONS
3	30.82	3.66	43	BELIEF 43	PRACTICE QUESTIONS
2	28.12	4.60	43	BELIEF 43	PRACTICE QUESTIONS
1	57.77	.96	44	BELIEF 44	ASSESSMENTS FOR CUTS
3	62.40	1.69	44	BELIEF 44	ASSESSMENTS FOR CUTS
2	64.15	1.85	44	BELIEF 44	ASSESSMENTS FOR CUTS
1	57.45	.96	45	BELIEF 45	TEACH SELF-CONFIDENCE
3	44.63	2.17	45	BELIEF 45	TEACH SELF-CONFIDENCE
2	44.88	2.39	45	BELIEF 45	TEACH SELF-CONFIDENCE
1	57.07	.96	46	BELIEF 46	SOCIALIZING IN SCHOOL
3	32.03	3.47	46	BELIEF 46	SOCIALIZING IN SCHOOL
2	34.31	3.50	46	BELIEF 46	SOCIALIZING IN SCHOOL
1	61.08	.99	47	BELIEF 47	IMMIGRANTS AMERICAN WAY
3	56.44	1.73	47	BELIEF 47	IMMIGRANTS AMERICAN WAY
2	64.57	1.87	47	BELIEF 47	IMMIGRANTS AMERICAN WAY
1	60.72	.99	48	BELIEF 48	REALISTIC PERFORMANCE
3	39.81	2.55	48	BELIEF 48	REALISTIC PERFORMANCE
2	41.19	2.73	48	BELIEF 48	REALISTIC PERFORMANCE

1	64.44	1.04	49	BELIEF 49 POINT OF VIEW
3	62.41	1.70	49	BELIEF 49 POINT OF VIEW
2	63.79	1.88	49	BELIEF 49 POINT OF VIEW
1	67.56	1.12	50	BELIEF 50 EXTERNAL CONTROL
3	27.66	4.19	50	BELIEF 50 EXTERNAL CONTROL
2	18.49	7.15	50	BELIEF 50 EXTERNAL CONTROL
3	**65.08**	**1.96**	51	QUESTIONNAIRE 1 PROFESSIONAL IMPROVEM
2	**63.40**	**3.30**	51	QUESTIONNAIRE 1 PROFESSIONAL IMPROVEM
3	61.26	1.95	52	QUESTIONNAIRE 2 PROFESSIONAL COLLABOR
2	61.24	3.27	52	QUESTIONNAIRE 2 PROFESSIONAL COLLABORATION
3	58.56	1.97	53	QUESTIONNAIRE 3 REWARDING BEHAVIOR
2	63.40	3.30	53	QUESTIONNAIRE 3 REWARDING BEHAVIOR
3	60.17	1.98	54	QUESTIONNAIRE 4 VALUE COMMUNITY & WORKING TOGETHER
2	61.24	3.27	54	QUESTIONNAIRE 4 VALUE COMMUNITY & WORKING TOGETHER
3	60.70	1.97	55	QUESTIONNAIRE 5 PLANNING
2	56.97	3.28	55	QUESTIONNAIRE 5 PLANNING
3	63.87	1.99	56	QUESTIONNAIRE 6 ASSESSMENTS FOR DECISIONS
2	59.11	3.26	56	QUESTIONNAIRE 6 ASSESSMENTS FOR DECISIONS
3	66.29	2.03	57	QUESTIONNAIRE 7 LESSONS THAT DIDN'T WORK
2	74.47	3.84	57	QUESTIONNAIRE 7 LESSONS THAT DIDN'T WORK
3	56.62	2.10	58	QUESTIONNAIRE 8 COLLABORATE ABOUT A STUDENT
2	53.70	3.33	58	QUESTIONNAIRE 8 COLLABORATE ABOUT A STUDENT
1	**24.91**	**13.23**	59	FOCUS 1 GROUP WORK TO FOSTER GROWTH
3	**25.84**	**5.57**	59	FOCUS 1 GROUP WORK TO FOSTER GROWTH
1	24.90	13.23	61	FOCUS 3 ENTHUSIASTIC & KNOWLEDGEABLE
1	60.41	31.46	62	FOCUS 4 KNOWLEDGE AS EVERYDAY LIFE
1	24.90	13.23	63	FOCUS 5 FEEDBACK AND SUPPORT
2	75.28	3.95	65	BELIEF FU 51 STANDARDS FOR PLANNING
2	67.06	5.06	66	BELIEF FU 52 HELP FROM COLLEAGUES
2	64.38	5.32	68	BELIEF FU 54 MODEL RESPECT
2	76.63	3.73	69	BELIEF FU 55 SPUR OF MOMENT DECISIONS
2	81.30	3.13	70	BELIEF FU 56 TEACHER'S IN CONTROL
2	103.04	1.84	71	BELIEF FU 57 STANDARDS ARE ALL NEEDED
2	61.48	5.40	73	BELIEF FU 59 LISTEN TO SUGGESTIONS
2	106.58	1.85	74	BELIEF FU 60 STANDARDS HURT CREATIVITY
2	99.46	1.93	75	BELIEF FU 61 RULES ARE NOT ABSOLUTES

Here, 2 different institutions show very similar values on the questionnaire when asked about professional improvement (self-motivated), but it was still very difficult for students. Why, after all the discussion about "lifelong learning" and professional development plans do students still find it hard to internalize the value? Do they really believe it?

These two institutions' students reported that group work is important to foster growth and value peer learning. They also found this to be an "easy" item that CHILDREN reported as part of a focus group discussing their perception of their teachers. Good job for the programs (assuming this is a value we desire) that seems to have an impact on the students!

I guess you can see many, many possibilities for analysis of this type.

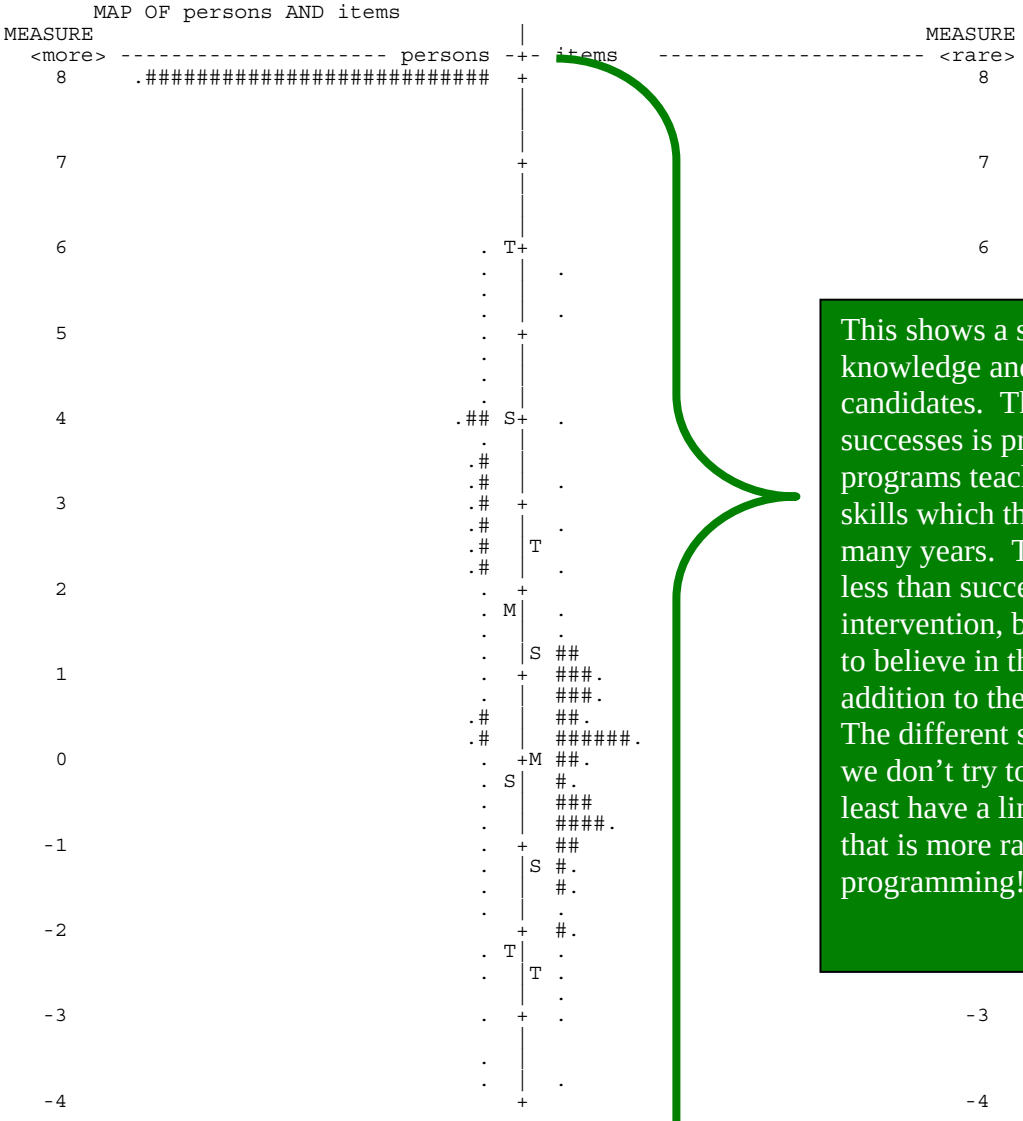
```
TABLE 1.1 DispositionScaleSRaschAnalysis          ZOU638ws.txt Feb 17 18:40 2005
INPUT: 801 persons, 75 items  MEASURED: 801 persons, 65 items, 8 CATS       3.49
--------------------------------------------------------------------------------

       MAP OF persons AND items
MEASURE                                  |                                 MEASURE
  <more> --------------------- persons -+- items   --------------------- <rare>
  160                                    +                                   160
                                         |
                                         |
  150                                    +                                   150
                                         |
                                         |
  140                                    +                                   140
                                         |
                                         |
  130                                    +                                   130
                                         |
                                         |
  120                                    +                                   120
                                         |
                                         |
  110                                    +                                   110
                                         |  X
                                         |  X
  100                                    +  X                                100
                                         |
                                         |
   90                                    +                                    90
                                         |T
                                         |
   80                                    +  X                                 80
                                      .  |  XX
                                    ###  |
   70                              #### T+S                                   70
                         .############## |  XX
                   .#################### S|  XXXD
   60      .########################### +  XXXXXXDD
          ############################## M|  XDD
           .############################ |  DDDDDDD
   50                .################# S+M DD
                               .####### |  DDDDDDD
                                   .### T|  DD
   40                              .###  +  DDDDDD
                                      .  |  DDD
                                      .  |  DDDD
   30                                    +S DD                                30
                                         |  XDD
                                         |  XX
   20                                    +  DD                                20
                                         |  D
                                         |T
   10                                    +                                    10
                                         |
                                         |
    0                                    +                                     0
                                         |
                                         |
  -10                                    +                                   -10
                                         |
                                         |
  -20                                    +  X                                -20
  <less> --------------------- persons -+- items   ------------------<frequent>
 EACH '#' IN THE person COLUMN IS   5 persons; EACH '.' IS 1 TO   4
```

Notice the "normal" distribution for the Disposition measures. Contrast this with the next graph of Knowledge and Skills from a different set of measures!

TABLE 1.1 MasterTasks USF PATS, ACP FL, SOUTHERN ZOU476ws.txt Feb 17 20:17 2005
INPUT: 771 persons, 474 items MEASURED: 679 persons, 473 items, 3 CATS 3.49

MAP OF persons AND items



This shows a skewed distribution of the knowledge and skills of teacher candidates. The large number of successes is probably because most programs teach the knowledge and skills which they have targeted for many years. The smaller number of less than successful are ready for intervention, but do we want students to believe in the values of teaching in addition to the knowledge and skills. The different shapes seem to indicate we don't try to target dispositions, or at least have a limited effect on students that is more random than programming!

Conclusion

In short, we have a long way to go to improve disposition, value, or belief internalization in our current programs, but the door is open. We measure what we treasure – and once measured most of us have the value to make it better.

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