

Next Element Compassionate Accountability Assessment – Updated Short Form: Psychometric Technical Report

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Purpose and Executive Summary

Summary

This technical report reviews the construct and content validity as well as the reliability of the most recent version of the *Compassionate Accountability Assessment (CAA) - Short Form*. The reliability and validity were assessed by examining the following evidence and comparing it to the previous version of the *CAA - Short Form*. The assessment consists of 27 items spanning across six dimensions; three Compassion Skills, and Three Drama Roles. After collecting and analyzing data from 487 participants, the following conclusions were made regarding the updated *CAA - Short Form*.

- Coefficient alphas of the overall survey as well as each of the six factors were satisfactory.
 - Alphas ranged from an acceptable .60 to a good .73.
- Significant correlations among items on each factor.
 - Items on each scale are related but still distinct.
- Six clear factors from the Exploratory Factor Analysis (EFA).
 - Each dimension measures a unique component of Compassion and Drama and each item is adding something unique to the model.
- Acceptable fit indices of the CFA analysis.
 - The final six factor model with 27 items is superior to other models for explaining the data and shows the best fit with the least amount of error. This means the assessment is measuring the constructs accurately.

Conclusion: The updated CAA Short-Form is reliable based on an internal consistency alpha of .73. This assessment is also valid based on a six-factor structure with acceptable fit indices.

Background

The purpose of this report is to provide psychometric information on the updated version of the *CAA - Short Form*. The CAA (previously called Drama Resilience Assessment) was originally developed with 57 items to measure three Drama Roles (Victim, Rescuer, Persecutor), and three Compassion Skills (Openness, Resourcefulness, Persistence), three Leading Indicators for



Drama (Giving In, Giving Unsolicited Advice, Giving Ultimatums), and three Choices to Move (State your Wants, Let Go and Move On, Stop and Listen). Two other indices (Drama Allies/Adversaries, and Drama-Based Helping) were calculated based on relationships between the other scales. This version of the assessment was used for over ten years across all Next Element (NE) training programs, including a global network of certified trainers, coaches and consultants. While the reliability and validity were adequate, the length of the assessment was a barrier for participants.

In 2018 when NE partnered with a Chinese training company in to begin training in China and translate the CAA, this necessitated building a separate web portal and using a different server due to Chinese firewall constraints. NE took this opportunity to launch a shortened version of the CAA, which has been in use since then in China.

In 2019 when NE launched the Compassion Mindset curriculum with a new web portal, this same shortened version of the CAA was used to generate Compassion scale scores for that curriculum. The English version of the CAA Short-Form has been in use since 2019.

In 2023 Next Element engaged Thought Leadership Leverage, a business strategy consulting firm, to analyze the psychometric properties of the CAA Short-Form. Analyses were conducted by A.J. Marsden, PhD, a consultant and research psychologist for TLL, and an associate professor at Beacon College. See more details in Appendix A.

CAA Short-Form data were analyzed using a combined data set that included Chinese and English data. Two problematic issues were discovered: whereas Drama-Victim and Drama-Rescuer scales each had three items, Drama-Persecutor only had two items; and wording on several questions was poorly worded and confusing and may have contributed to lower factor loadings. To correct these two issues, updates were made to the English version of the CAA Short-Form, and new data was collected from 487 participants between June – August, 2024.

The new, CAA Short-Form consist of 27 total items:

- There are three dedicated items on each of the following Compassion skills/dimensions:
 Openness, Resourcefulness, and Persistence. Two more items connecting to each
 compassion skill (Choices to Move) were included in the Compassion skills/dimension
 analyses.
- There are three items on each of the following Drama roles/dimensions: Drama-Victim,
 Drama-Rescuer, and Drama-Persecutor. One more item connecting to each Drama Role
 (Leading Indicator) was included in the Drama roles/dimensions analyses.



Objective

This report was prepared to meet the following objective:

 Review the psychometric data supporting the reliability and validity of the updated, new CAA - Short Form and compare the results to the previous version of the CAA - Short Form.

The reliability and validation analyses of the updated *new CA - Short Form* were conducted in accordance with the construct-oriented strategies recommended in the <u>Principles for the Validation and Use of Personnel Selection Procedures</u> of the Society for Industrial and Organizational Psychology (2003) and in conformity with the Federal Government's <u>Uniform Guidelines on Employee Selection Procedures</u>. This report is organized around the documentation standards outlined in the Principles and related professional standards.

Reliability Analyses: CAA Short-Form

Reliability addresses whether survey items produce consistent scores over time and is a basic requirement for standardized surveys. Reliability is usually estimated by one or more of the following: (1) the internal consistency of scales (average correlation among the items), (2) the stability of the scales (the degree of correspondence between test scores of a group of people over time), and/ or (3) the agreement between raters (how much consensus there is in the ratings given by judges or raters). A test must be considered reliable before it is meaningful to think about its validity.

Internal Reliability

Internal reliability analyses were conducted on a sample of 487 participants who completed the new CAA Short-Form. This sample population aligns with the target populations for the survey and is large enough to ensure adequate power.

The reliability of the overall test and each of the six factors was analyzed. In general, reliability coefficients should be over .70 (ideal reliability). Not all of the reliability coefficients for the updated version of the CAA - *Short Form* items meet this guideline. Most coefficients are greater than .40 (baseline threshold), with an overall coefficient of α = .72, which is good. Table 1 presents the internal consistency (Cronbach's alpha) coefficients for the overall survey and each of the six Compassion and Drama dimensions: Scores are listed for the old CAA Short-Form, the new CAA Short-Form without supporting items, and the new CA Short-Form with supporting items.



Table 1: Internal Consistency (Cronbach's alpha) Coefficients for Old and New

CAA Short-Form

DRA - Short Form Dimensions	Previous Scale: Number of Items	Previous Scale: Alpha Coefficient	Updated Scale: Number of Items	Updated Scale: Alpha Coefficient	Updated Scale with Supporting Items: Number of Items	Updated Scale with Supporting Items: Alpha Coefficient
Overall (Full) Scale	17	.72	18	.72	27	.73
Openness	3	.55	3	.58	5	.62
Resourcefulness	3	.67	3	.65	5	.70
Persistence	3	.42	3	.60	5	.60
Drama-Victim	3	.31	3	.47	4	.67
Drama-Rescuer	3	.68	3	.68	4	.68
Drama-Persecutor	2	.57	3	.64	4	.64

As you can see from Table 1, Alpha coefficients for the updated CAA Short-Form are improved over the old form (see green shaded cells) and further improved by including supporting items (see green shaded cells). Overall internal consistency reliability is .73 for the new CAA Short-Form, which is good. Individual scale scores meet the .40 threshold, and approach .70, which is acceptable.

Conclusion: The new CAA Short-Form is reliable.

Validity Analyses: CAA - Short-Form

Validity addresses whether survey items measure what they purport to measure. Validating a model with survey items is a complex process in which evidence is gathered to provide a scientific basis for interpreting participant scores. In order to determine whether the survey is measuring what it claims to be measuring, a content and construct validation approach was used for this report. By examining the validity of the survey items, we can determine if the measure is assessing the six dimensions of updated *DRA - Short Form* as intended.



Construct validity is essential to the overall validity of the model and survey items. For the purposes of this report, construct validity is examined through correlational analyses and exploratory and confirmatory factor analyses.

Correlational Evidence of Construct Validity

The Pearson Product-Moment Coefficient, or "the correlation coefficient", analyzes the degree of correlation, or relationship between items and dimensions (factors). Coefficients that are closer to +1.00 indicate stronger relationships. Tables 2-7 show the inter-item correlations for the three Compassion scales and three Drama scales.

Table 2: Correlations between Items and Factors for Compassion - Openness

Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

Old Items for Openness	Item 1	Item 2	Item 3		New Items for It		Item 1	Item 2	Item 3	
I let others know how I am feeling and what I really want.	1.000				I disclose my emotions to others.		ns	1.000		
I let others know that their feelings and what	.265**	1.000			about	others that I what they are encing.		.238**	1.000	
I relate to others because I can feel what they are feeling.	.205**	.421**	1.000		I relate to others because I can feel what they are feeling.			.225**	.427**	1.000
New Items for Openness with Choice to Move (State your Wants) items				Item	1	Item 2	Item	າ 3	Item 4	Item 5
I disclose my emotions to	others.			1.000)					
I show others that I care a experiencing.	I show others that I care about what they are experiencing.				*	1.000				
I relate to others because	I relate to others because I can feel what they are feeling.				*	.427**	1.00	00		
I ask for what I need.	ask for what I need.				•	.144*	.060)	1.000	
l let people know how I want to feel.				.449*	**	.213**	.200)**	.226**	1.000

Conclusion: The correlations among items for Openness are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Choices to Move (State Your Wants) items maintains construct validity.



Table 3: Correlations between Items and Factors for Compassion Resourcefulness Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

Old Items for Resourcefulness	Item 1 Item 2 Item 3			New Items for Resourcefulness	Item 1	l Item 2	Item 3	
I help bring out everyone's ideas and contributions so we can find the best solution.	1.000				I help bring out everyone's ideas an contributions so we find the best solution	can		
I help others solve problems with their own strengths and abilities.	.485**	1.000			I help others solve problems with their own strengths and abilities.	.471* r	* 1.000	
I build on success, and learn from mistakes.	.321**	.396**	1.000		I apply what I've learned from past successes to help w	.317* vith	* .337**	1.000
					current problems.			
New Items for Resou Move (Let Go and Mo			oice to	Item	1 Item 2	Item 3	Item 4	Item 5
I help bring out everyone's find the best solution.	s ideas and	contributio	ns so we can	1.000				
I help others solve proble abilities.	I help others solve problems with their own strengths and abilities.							
I apply what I've learned current problems.	I apply what I've learned from past successes to help with current problems.					1.000		
I accept the consequences of difficult choices.					.323**	.466**	1.000	
After a decision is made,	I can let go	o.		.187*	.205**	.221**	.336**	1.000

Conclusion: The correlations among items for Resourcefulness are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Choices to Move (Let Go and Move On) items maintains construct validity.



Table 4: Correlations between Items and Factors for Compassion - Persistence Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

Old Items for Persistence	Item 1	Item 2	Item 3		New Item Persisten		Item 1	Item 2	Item 3
I let people know what's important to me, including my boundaries and my beliefs.	1.000				I let people know what's important to me, including my boundaries and my beliefs.		1.000		
I encourage others to follow the rules and keep their promises without putting them down or being bossy.	.155*	1.000			I encourage others to follow the rules and keep their promises without putting them down or being bossy.		.170*	1.000	
When I do something wrong, I accept responsibility and work to make it right.	.244**	.271**	1.000		When I do something wrong, I accept responsibility and work to make it right.		.138*	.323**	1.000
New Items for Persis and Listen) items	tence wit	h Choice	to Move (Stop	Item 1	Item 2	Item 3	Item 4	Item 5
I let people know what's boundaries and my belie		to me, incl	uding my		1.000				
I encourage others to fol without putting them do			o their prom	nises	.230**	1.000			
When I do something wr make it right.	bility and w	.091	.309**	1.000					
I pay attention to my we	ellbeing.				.200**	.087	.144*	1.000	
I pay attention to others	s' wellbeing	g.			.180*	.304**	.277**	.214**	1.000

Conclusion: The correlations among items for Persistence are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Choices to Move (Stop and Listen) items maintains construct validity.



Table 5: Correlations between Items and Factors for Drama - Victim Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

Old Items for Drama - Victim	Item 1	Item 2	Item 3		New Items for Drama - Victim	Item 1	Item 2	Item 3		
I feel like it's my fault when things go badly.	1.000				I feel like it's my fault when things go badly.	1.000				
I shut down or try to leave the situation when there's conflict.	.138**	1.000			When there's conflict, I shut down.	.202**	1.000			
I'm willing to take the blame or get in trouble as long as it helps someone else.	.262**	008	1.000		I do things for others, even if it's not good for me.	.288**	0.094	1.000		
New Items for Drama - Victim with Leading Indicator (Give Item 1 Item 2 Item 3 Item In) item.										
I feel like it's my fault v	when thing	s go badly.		1.000						
When there's conflict,	I shut dow	n.		.211** 1.0	00					
I do things for others,	even if it's	not good fo	or me.	.378** .18	9*	1.000				
I put other people's ne	eds ahead	of mine to	keep the p	eace.	.390** .32	6**	.511**	1.000		

Conclusion: The correlations among items for Victim are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Leading Indicators (Give In) item maintains construct validity.



Table 6: Correlations between Items and Factors for Drama-Rescuer Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

		Old Items for Drama - Rescuer		Item 1 Item 2		Item 3			
I usually have the best solutions and ideas.	1.000				I usually have the solutions and ic		1.000		
I believe people should follow my good suggestions.	I believe people follow my good suggestions.	.394**	1.000						
I know people would be better off if they came to me for help.	.410**	.450**	1.000		I know people would be better off if they came to me for help.		.419**	.453**	1.000
New Items for Drama (Give Unsolicited Adv			ading Indi	cator	tem 1	Item 2	ltem	3	Item 4
I usually have the best so	lutions and	l ideas.			1.000				
I believe people should fo	ollow my go	ood sugges	tions.		.383**	1.000			
I know people would be I	better off i	they came	to me for h	elp.	.408**	.427**	1.00	0	
When I have good advice if they didn't ask me first		help somed	one, I tell the	em, ev	ren .231**	.297**	.243	**	1.000

Conclusion: The correlations among items for Rescuer are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Leading Indicators (Give Unsolicited Advice) item maintains construct validity.



Table 7: Correlations between Items and Factors for Drama-Persecutor Dimension

Note. * indicates significance at the p < .05 level and ** indicates significance at the p < .01 level

Old Items for Drama - Persecutor	Item 1	Item 2	Item 3	New Item Drama - F	ns for Persecutor	Item 1	Item 2	Item 3
I criticize people who don't do what they are supposed to do.	1.000			I'm critical who don't of thing.	of people do the right	1.000		
I let people know when they are lazy, stupid, or wrong.	.400**	1.000		I'm critical who are irre or incompe	esponsible	.635**	1.000	
					I let people know when it's not my fault.		.242**	1.000
New Items for Drama Indicator (Give Ultim			Leading	Item 1	Item 2	Item 3	ltε	em 4
I'm critical of people who	don't do t	he right thi	ng.	1.000				
I'm critical of people who	are irresp	onsible or i	ncompetent.	.635**	1.000			
I let people know when it	s not my f	ault.		.233**	.242**	1.000		
I let people know what w	vill happen	if they doi	n't do what I wa	nt. .201**	.190*	.215**	1.0	000

Conclusion: The correlations among items for Persecutor are statistically significant and fit a pattern that contributes to evidence of strong construct validity. The addition of Leading Indicators (Give Ultimatums) item maintains construct validity.

The correlations among items for all six factors are statistically significant and fit a pattern that contributes to evidence of strong construct validity.



Factor Analyses Evidence of Construct Validity

For the updated version of the *CAA - Short-Form*, there were six hypothesized factors or dimensions. To demonstrate construct validity, each survey item should load onto its appropriate factor. The purpose of an exploratory factor analysis (EFA) is to determine the underlying relationships between items and identify the set of underlying latent constructs, in this case, the six factors of the model.

For the EFA, a maximum likelihood (ML) method was used because it allows for a wide range of goodness of fit indices to determine the accuracy of the six-factor model and it permits statistical significance testing of factor loadings and correlations. In the case of this survey, it is expected that the factors will correlate; therefore, an oblique rotation was used because it permits correlations among factors.

First, the communalities are examined in Table 8. The communalities indicate how much of the variance in each item is explained by the extracted factor. Ideally, communalities should be greater than .30, which is the case for all items in the CAA Short-Form.

Table 8: Communality Extractions

Item		Extraction Communality
1.	I disclose my emotions to others.	.356
2.	I show others that I care about what they are experiencing.	.598
3.	I relate to others because I can feel what they are feeling.	.404
4.	I help bring out everyone's ideas and contributions so we can find the best solution.	.421
5.	I help others solve problems with their own strengths and abilities.	.481
6.	I apply what I've learned from past successes to help with current problems.	.508
7.	I let people know what's important to me, including my boundaries and my beliefs.	.311
8.	I encourage others to follow the rules and keep their promises without putting them down or being bossy.	.364
9.	When I do something wrong, I accept responsibility and work to make it right.	.397

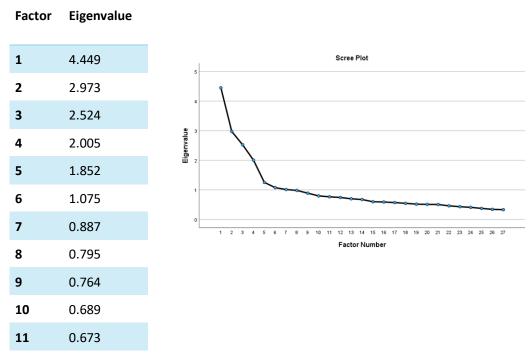


10. I feel like it's my fault when things go badly.	.432
11. When there's conflict, I shut down.	.400
12. I do things for others, even if it's not good for me.	.503
13. I usually have the best solutions and ideas.	.386
14. I believe people should follow my good suggestions.	.450
15. I know people would be better off if they came to me for help.	.476
16. I'm critical of people who don't do the right thing.	.592
17. I'm critical of people who are irresponsible or incompetent.	.713
18. I let people know when it's not my fault.	.406
19. I put other people's needs ahead of mine to keep the peace.	.564
20. When I have good advice that will help someone, I tell them, even if they didn't ask me first.	.335
21. I let people know what will happen if they don't do what I want.	.316
22. I ask for what I need.	.397
23. I let people know how I want to feel.	.523
24. I accept the consequences of difficult choices.	.505
25. After a decision is made, I can let go.	.403
26. I pay attention to my wellbeing.	.406
27. I pay attention to others' wellbeing.	.599

A primary purpose of an EFA analysis is to determine the number of factors present in the data. Identification of eigenvalues greater than 1.00 is an approach commonly used to identify the number of factors. Another approach is a clear separation or gap between factors. Factors with eigenvalues greater than 1.00 and that are clearly separated from the other factors indicate a large percentage of the variance is being accounted for. Table 9 shows eigenvalues for the factors identified in the new CAA Short-Form.



Table 9: Eigenvalues and Scree Plot for Exploratory Factor Analysis



The initial analysis of the data demonstrated that there were 6 factors with eigenvalues greater than 1.00, thus supporting a six-factor structure.

Next, the factor structure was analyzed. Table 10 shows the items with the highest correlations on each factor.

Table 10: Factor Structure for Compassion Mindset DRA - Short Form

Ite	m		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	1.	I disclose my emotions to others.	.296	.047	.025	.088	023	.147
	2.	I show others that I care about what they are experiencing.	.639	106	.137	.122	095	128
	3.	I relate to others because I can feel what they are feeling.	.382	078	.143	.126	118	080
	4.	I ask for what I need.	.462	.084	055	.118	.096	.163



5.	I let people know how I want to feel	.532	.029	.189	039	158	.041
6.	I help bring out everyone's ideas and contributions so we can find the best solution.	042	.627	.062	073	018	075
7.	I help others solve problems with their own strengths and abilities.	.107	.561	046	.039	.092	.144
8.	I apply what I've learned from past successes to help with current problems.	.164	.430	143	.189	.008	137
9.	I accept the consequences of difficult choices.	.031	.509	025	148	.069	.029
10	. After a decision is made, I can let go.	002	.359	077	103	.039	.044
11	. I let people know what's important to me, including my boundaries and my beliefs.	.121	011	.464	106	044	104
12	. I encourage others to follow the rules and keep their promises without putting them down or being bossy.	.051	.077	.466	.027	.032	.015
13	. When I do something wrong, I accept responsibility and work to make it right.	.016	015	.467	083	.005	.120
14	. I pay attention to my wellbeing.	.048	177	.417	.147	036	.043
15	. I pay attention to others' wellbeing.	.011	152	.652	.013	.034	088
16	. I feel like it's my fault when things go badly.	115	.161	.027	.480	175	.039
17	. When there's conflict, I shut down.	034	018	.174	.402	.112	103
18	. I do things for others, even if it's not good for me.	.014	.096	.105	.616	.102	.022
19	to keep the peace.	092	048	121	.719	.068	002



2	I usually have the best solutions and ideas.	.132	.077	010	.177	.433	121
2	I believe people should follow my good suggestions.	.112	.122	.124	093	.561	057
2	2. I know people would be better off if they came to me for help.	.076	.126	.111	016	.453	153
2	3. When I have good advice that will help someone I tell them, even if they didn't ask me first.	.116	.160	.102	.170	.356	.019
2	I'm critical of people who don't do the right thing.	016	072	.005	.099	.124	.720
2	5. I'm critical of people who are irresponsible or incompetent.	-088	029	.022	078	109	.756
2	6. I let people know when it's not my fault.	015	.021	062	027	.118	.352
2	7. I let people know what will happen if they don't do what I want.	.037	.054	062	.003	.118	.354

There is a clear pattern demonstrating the six factors or dimensions identified in the new CAA Short-Form. Note that the items loading most strongly on each factor match exactly the items designated for each scale.

Next, it is important to determine if each item is loading onto the correct factor. In order for this to be accurately determined, a confirmatory factor analysis (CFA) is calculated.

The primary purpose of the CFA is to determine if the data fit the hypothesized six factor model. The CFA will help determine if the items fit onto the correct hypothesized factors. As with the EFA, for the CFA a maximum likelihood method with oblique rotation was calculated.

CFA statistics were calculated for a 6-factor and 2-factor model, with and without the supporting items.

Table 11 shows the Confirmatory Factor Analysis (CFA) fit statistics.



Table 11: CFA Fit Statistics

Note. Δ = Change in Chi-square and degrees of freedom (df)

Fit Statistic	6-Factor	2-Factor	6-Factor with Supporting Items	2-Factor with Supporting Items
χ2	1094.11	1822.62	953.81	2796.98
df	104	118	237	276
RMSEA	0.085	0.100	0.079	0.932
RMR	0.077	0.092	0.075	0.097
GFI	0.911	0.840	0.944	0.852
PNFI	0.958	0.519	0.966	0.567
NFI	0.975	0.613	0.959	0.659

The overall goodness of fit statistics or indices (e.g., SRMR, RMSEA, CFI) assesses each fit class (absolute, parsimony, and comparative) in order to determine the model that best fits the data.

The absolute fit indices (χ 2, GFI) determine how well the proposed six factor model fits the data. Ideally, the χ 2 should be smaller and the GFI should be close to +1.00.

The parsimony fit index (PNFI) determines how parsimonious, or simple, the model is. The more complex the model is, the lower the fit index will be, so ideally the PNFI should close to +1.00.

Finally, the comparative fit index (NFI) determines the discrepancy between the data and hypothesized factor model. Again, the NFI should be close to +1.00.

The RMSEA and RMR fit indices indicate error in the model; therefore, these numbers should be close to 0.

Conclusion: The hypothesized 6-factor model fit the data better than any other factor model. This supports the six dimensions assessed by the new CAA Short-Form; three Compassion Scales (Open, Resourceful, Persistent) and three Drama Scales (Victim, Rescuer, Persecutor).



Conclusions

This technical report provides solid support for the psychometric value of the updated CAA - Short Form.

- 1. The 27-item Compassionate Accountability Assessment is reliable, with an internal consistency alpha coefficient of .73. In addition, each of the six dimensions exceeds the minimum threshold for reliability.
- The 27-item Compassionate Accountability Assessment is valid with a clearly supported six-factor structure matching the six primary scales of Compassion and Drama.

References

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About the Author

This report was prepared by A. J. Marsden, Ph.D. Dr. Marsden received her M.A. and her Ph.D. in Industrial/Organizational Psychology from the University of Missouri-St. Louis.

Dr. Marsden is an Industrial/Organizational Psychologist with Thought Leadership Leverage. She has over ten years of experience consulting in education and psychological measurement, assessment, and testing.