



ADAPTIVE MINDSET[®]

for RESILIENCE

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Introduction

TRACOM develops programs that are grounded in empirical research and theory. This technical report describes the research and development of the Adaptive Mindset for Resilience™ Model and assessment; it accompanies other facilitator materials for the Building Adaptability™ and Introducing Adaptability™ programs.

Before you begin reading this report, we encourage you to familiarize yourself with the Glossary. Terms in this section are used frequently throughout this report and it is important that you understand them.

Glossary

This report is intended to be understandable for facilitators and other users of our programs. There are some technical terms that are used throughout the report and it's important to define these upfront.

- Reliability – This determines whether the assessment is consistent and precise.
- Validity – This determines whether the assessment measures accurately. In other words, does it truly measure the concepts that it proposes to measure?
- Correlation – A correlation coefficient determines the extent to which two variables are related to each other. Values range from 0.0 (no relationship) to 1.0 (perfect relationship). For example, height and weight are proportional to each other and should be highly correlated. In fact, the correlation between height and weight among adults is 0.44, a strong relationship (Meyer et al., 2001).
- Item – An item is often called a “survey question.” There are two types of items on this assessment.
 - First, behavioral statements are used to measure Resilience Skills. An example of a behavioral statement is “Monitors progress on goals.” The person responds on a six-point scale from “strongly disagree” to “strongly agree.”
 - Second, forced-choice items measure a person’s Primary Negativity Bias. This section of the assessment is self-perception only since raters do not have insight into a person’s thoughts. The person is given various scenarios with six response options (one for each type of Negativity Bias) and is required to choose one option that is “most like me.”
- Scale – A scale is a collection of survey items that measures a single construct. For example, Self-Composure is a scale. It is measured by a group of items that are all related to the Self-Composure construct (e.g., “Stays composed even during stressful times,” “No one knows it when they are under pressure.”)
- Profile – A profile is the actual report that is given to each participant. It includes information about the learner’s Negativity Bias and standing on each of the Resilience Skills.
- Norms – Normative scores, or norms, are statistics that describe the performance of a particular population, such as people from the same country or job group. Norms are a reference point that we create so people can compare themselves to others. Norms allow you to say, for example, that you are more Self-Assured than 33% of the U.S. population. Norms are used on the Resilience Skills section of the profile and are not used on the Negativity Bias portion. The reasoning for this is explained in the report.

Stress and Resilience

Workers are under an enormous amount of stress and this affects their health and performance. The American Psychological Association's *Work in America* survey (APA, 2023) found that 77% of workers reported experiencing work-related stress in the last month. Further, 57% indicated experiencing negative impacts because of work-related stress that are sometimes associated with workplace burnout, such as:

- emotional exhaustion (31%)
- didn't feel motivated to do their very best (26%)
- a desire to keep to themselves (25%)
- a desire to quit (23%)
- lower productivity (20%)
- irritability or anger with co-workers and customers (19%)
- feelings of being ineffective (18%)

Many workers are not getting any relief from this stress. Only 40% said that their employer offers a culture where time off is respected, and only 29% reported that their employer offers a culture where managers encourage employees to take care of their mental health.

Further research reveals that 25% of U.S. workers say their job is the number one stressor in their lives, and about one million Americans miss work each day because of stress (Zippia, 2023). The top three causes of workplace stress are:

- workload (39%)
- interpersonal issues (31%)
- work-life balance (19%)

This level of stress can affect important business issues, top among them the willingness to support change. According to Gartner (2022), 74% of employees were willing to support organizational change in 2016; in 2022, only 38% said the same. This correlates with a lower intent to stay with the organization: Only 43% of employees who experience above-average change fatigue intended to stay with their organization, compared with 74% of employees with low levels of fatigue.

A moderate amount of stress can help performance, but these statistics indicate that employees regularly experience detrimental stress. One critical way to help employees strengthen their responses to challenges and effectively manage change is by building their resilience (Shin, Taylor, & Seo, 2012). Resilience is individuals' developable capacity to adapt to change and stressors in a way that not only allows them to bounce back, but also to grow and improve from the experience. Highly resilient people are action-oriented and find opportunities in adversity.

Research shows that personal resilience is linked to many positive health and work outcomes, including:

- less psychological distress (Utsey, Geisbrecht, Hook, & Stanard, 2008)
- fewer injuries at work (Siu, Hui, Phillips, Lin, Wong, & Shi, 2009)
- increased job performance (Luthans, Avolio, Avey, & Norman, 2007)
- greater job satisfaction, work happiness, and organizational commitment (Youssef & Luthans, 2007)
- better work-life balance (Siu, Hui, Phillips, Lin, Wong, & Shi, 2009)
- lower intentions to quit (Avey, Luthans, & Jensen, 2009; Naswall, Malinen, & Kuntz, 2013)

Researchers and business leaders maintain that resilience is a key distinguishing feature between those who make a powerful impact with good ideas and those who don't (McKinley, 2013), and those who succeed and those who fail (Coutu, 2002). Stress and adversity are not going to disappear, so providing models and strategies for workers to enhance their resilience is essential.

The Resilience Model and assessment consists of two distinct parts: Resilience Skills and the Negativity Bias. In the next sections we describe how the model was revised, followed by the research and development of the Resilience Skills and Negativity Bias.

Model Revision

TRACOM originally developed the Resilience Model in 2013. In 2022 we embarked on a revision of the model and assessment. The largest change was adding a new section that measures a person's Primary Negativity Bias. This was done because the Negativity Bias represents a person's automatic negative thinking during stressful moments, and it's fundamental for a person to be aware of these thoughts in order to counteract them with more rational, useful thinking. Previously, the Negativity Bias was taught as part of the courses but was not measured. We felt it was valuable for people to assess their Negativity Bias and get advice for how to counteract their specific type of Negativity Bias. The research on this part of the assessment will be described later.

The Resilience Skills assessment was largely unchanged except that two skills were dropped (Personal Beliefs and Personal Responsibility). These skills were dropped because they were self-assessment only and input from participants indicated they weren't seen as being as important as the other skills. Since the program is for the workplace, and to streamline the model as much as possible, we decided these skills could be dropped without losing significant value.

RESILIENCE AND SOCIAL STYLE®

Many of our customers use programs on both SOCIAL STYLE and Adaptability, and we wanted to offer those participants a bridge between the two programs and profiles. Therefore, we developed two versions of the profile: the standard version and one that incorporates SOCIAL STYLE into the results. Any participant who has previously profiled using our SOCIAL STYLE assessment will have their Style results automatically incorporated into their Resilience profile. These individuals receive special sections that describe how their Style can affect their Negativity Bias and their Resilience Skills, along with special Style-specific strategies on how to overcome the Negativity Bias and practice the skills. Refer to the *Adaptive Mindset for Resilience Profile Guide* for further information on the two profile versions. Note that this technical report does not describe any research on SOCIAL STYLE; that is documented in a separate *SOCIAL STYLE & Versatility Technical Report*.

Research and Development of the Resilience Skills

The Resilience Skills are a set of skills that lead to greater adaptability and resilience. This set of skills were gathered from decades of research on abilities that differentiate resilient people from those with less resilience. We specifically focus on skills that are important for work performance, though all of these skills can apply to every facet of life.

The original Resilience Skills were validated in 2013, having been researched on over 1,000 participants. As mentioned previously, two skills were dropped from the model. In the current iteration, seven Resilience Skills are measured:

- 1) *Realistic Optimism*: being positive while remaining grounded in reality.
- 2) *Self-Assurance*: the belief in oneself to perform successfully at work.
- 3) *Self-Composure*: the ability to manage stress and remain calm under pressure.
- 4) *Problem Solving*: the ability to plan and effectively resolve problems, generating innovative solutions that help you succeed.
- 5) *Goal Orientation*: setting appropriate goals, monitoring progress, and adjusting as needed.
- 6) *Courageous Communication*: speaking candidly during difficult times and when the situation requires it.
- 7) *Social Support*: having at least one person with whom you can have meaningful and supportive discussions.

Psychological assessments must meet criteria set forth in the “Standards for Educational and Psychological Testing” (American Educational Research Association et al., 2014), which provides benchmarks for assessing the quality of an assessment based on two forms of evidence: reliability and validity. We continuously examine the reliability and validity of the assessment, and the analyses presented here were conducted in 2023.

Reliability determines whether an instrument measures in a *consistent* and *precise* way, and there are several types of reliability evidence. The most common type is internal consistency, which determines whether people are responding to items that measure the same thing in a similar manner.

Validity determines whether an instrument measures *accurately*. In other words, does it measure what it's supposed to measure? The most common type of validity is factorial validity. It is determined using a statistical procedure called factor analysis, which uncovers the underlying dimensions of a set of items. Factorial validity supports the structure of the assessment and shows that all the items within each scale truly belong in the given scale.

Regarding reliability and validity, there are several points worth mentioning. First, an assessment can be reliable, but not valid. One way to think of this is to imagine a weight scale. If you weigh yourself every hour and consistently get the same result of 155 lbs., the scale would be reliable. However, the scale may not be accurate (valid) because you actually weigh 170 lbs. Similarly, an assessment might measure in a precise, stable way, but instead of measuring the construct it is intended to measure – resilience – it might measure something else, such as organization skills. Second, no psychological assessment is perfectly reliable or perfectly valid since assessments are affected by various sources of error. Psychologists speak about the *degree to which* an assessment is reliable or valid. The quality of the assessment is determined by accumulating evidence over time.

In the following sections, we provide descriptive statistics, which show the mean and standard deviation for each Resilience Skill. We then provide reliability and validity evidence.

DESCRIPTIVE STATISTICS

Descriptive statistics were calculated for each of the skills. The skills are measured on a six-point scale ranging from “strongly disagree” to “strongly agree” so the highest possible score is 6. The mean gives the average score for each skill and the standard deviation shows how much variability there is in the distribution of scores. Sixty-eight percent of scores lie within one standard deviation of the mean, 95% lie within two standard deviations, and 99.7% lie within three standard deviations. For example, Realistic Optimism has a mean of 5.09 and a standard deviation of 0.45, meaning that 68% of the scores fall between 4.64 (5.09 – 0.45) and 5.54 (5.09 + 0.45).

Table 1
Descriptive Statistics for Resilience Skills (N = 3,439)

Scale	Mean	Standard Deviation
Realistic Optimism	5.09	0.45
Self-Assurance	5.21	0.41
Self-Composure	4.90	0.55
Problem Solving	5.05	0.43
Goal Orientation	5.05	0.43
Courageous Communication	5.01	0.50
Social Support	4.98	0.75

SKILLS RANKED BY AVERAGE SCORE

Table 2 lists the skills in rank order, from lowest mean to highest mean. This is informative because it shows that Self-Composure is the most difficult skill to display (keep in mind this data comes from respondents' raters). This is not surprising since during difficult moments, many people will lose their composure, at least temporarily. Self-Assurance has the highest average score, with the rest of the skills hovering near 5.0 on the rating scale. Note that Social Support is the only self-evaluation skill on the list, so this score comes from participants' self-ratings.

Table 2
Resilience Skills Ranked Lowest to Highest (N = 3,439)

Scale	Mean	Standard Deviation
Self-Composure	4.90	0.55
Social Support	4.98	0.75
Courageous Communication	5.01	0.50
Problem Solving	5.05	0.43
Goal Orientation	5.05	0.43
Realistic Optimism	5.09	0.45
Self-Assurance	5.21	0.41

RELIABILITY

For reliability, we tested internal consistency and item-scale correlations.

Internal Consistency

Internal consistency determines whether participants are responding similarly to items within the same skill. For example, if a respondent indicates strong agreement with items such as "Productively manages stress" and "Controls their behavior during stressful times," that would produce high internal consistency for the skill "Self-Composure."

Cronbach's (1951) coefficient alpha was used to measure internal consistency. Alpha values range from 0.0 (no relationship among survey items) to 1.0 (perfect internal consistency). As a benchmark, a comprehensive review found that personality scales have an average alpha value of 0.77 (Charter, 2003). Also, note that an alpha value that is too high is not desirable – it indicates that items are redundant with one another and are not measuring unique facets of the skill.

A widely accepted rule of thumb for Cronbach’s alpha values is the following (Cicchetti, 1994):

- Excellent: greater than 0.90
- Good: between 0.80 and 0.90
- Satisfactory: between 0.70 and 0.80

Table 3 shows the Cronbach’s alpha coefficients for each of the Resilience Skills. Alpha values ranged from 0.86 to 0.94, indicating good and mostly excellent internal consistency.

Table 3
Alpha Reliability Coefficients for Resilience Skills (N = 3,439)

Skill	Number of items	Cronbach’s Alpha
Realistic Optimism	5	0.94
Self-Assurance	5	0.94
Self-Composure	5	0.94
Problem Solving	5	0.93
Goal Orientation	5	0.92
Courageous Communication	5	0.92
Social Support	5	0.86

Item-scale Correlations

In a reliable scale, all items will correlate with the total scale score. This shows that each item is consistent with the skill that the overall scale is measuring. For the multi-rater skills, the item-scale correlations ranged from 0.72 to 0.87, showing that the items fit well into their respective skills. The values for Social Support (self-perception only) ranged from 0.55 to 0.75, also showing good fit though not surprising lower than the multi-rater skills.

VALIDITY

We used factorial validity and scale intercorrelations to represent validity of the Resilience Skills.

Factorial Validity

Factor analysis is a statistical procedure that identifies the underlying structure of a set of items. If items cluster together within each skill, this supports the validity of the assessment.

Factor analysis is similar to internal consistency in that it indicates how closely items are clustering. However, unlike internal consistency, which is conducted on an established set of scale items, factor analysis does not impose any *a priori* assumptions or restrictions on the factor structure of the data. The output of factor analysis is unknown ahead of time.

Results of the factor analysis aligned with our expectations. First, we analyzed the 30 multi-rater items. Six factors emerged and accounted for 76% of the variance in the data set. The five items that measure each skill clustered together, other than Goal Orientation. This factor was not completely independent, with three items overlapping with the Problem Solving factor. This is understandable since when people solve problems, they are often guided by established goals. However, theoretically, Goal Orientation is distinct from Problem Solving. First, Problem Solving is reactive in that it arises in response to a challenge, whereas Goal Orientation is more proactive – it doesn't require a trigger event and is done before specific problems arise. Second, Problem Solving is cognitive – it involves defining the problem, gathering relevant information, and forming an innovative solution; whereas Goal Orientation is meta-cognitive – it is an overarching, higher-level cognitive process whereby people monitor and regulate their behavior and attention in relation to objectives. For these reasons, we continue to distinguish between the two skills.

A second factor analysis was conducted on all items but using only self-perception data. This was done to determine whether Social Support emerged as a distinct factor (since it's only measured through self-perception, there is no multi-rater data on this skill). As expected, the five items measuring Social Support emerged as a distinct single factor, providing significant support for this skill.

Scale Intercorrelations

We gain more validity evidence by examining scale intercorrelations, which measure the degree to which the scales are related to one another. If scales are related, then they are measuring what we intend to measure. For example, we would expect similar scales such as Goal Orientation and Problem Solving to exhibit moderate correlations with each other, while scales that are theoretically unrelated should have lower correlations, such as Social Support and Self-Composure. Benchmarks are provided by Dancey and Reidy (2004):

- Strong correlation: $r = 0.6$ to 0.9
- Moderate correlation: $r = 0.4$ to 0.6
- Weak correlation: $r = 0.1$ to 0.4

Table 4 shows that most scales were moderately to highly correlated, providing evidence that the Resilience Skills are related but distinct skills and fit well together on the assessment. As expected based on the factor analysis and theory, Problem Solving and Goal Orientation have the highest correlation (0.88).

Table 4
Intercorrelations of Multi-Rater Scales (N = 3,439)

Skill	Realistic Optimism	Self-Assurance	Self-Composure	Problem Solving	Goal Orientation	Courageous Communication
Realistic Optimism	1.00					
Self-Assurance	.69	1.00				
Self-Composure	.76	.56	1.00			
Problem Solving	.67	.76	.62	1.00		
Goal Orientation	.74	.75	.62	.88	1.00	
Courageous Communication	.55	.73	.37	.68	.69	1.00

Table 5 shows intercorrelations of the scales using self-perception data, which includes Social Support. The relationships among most scales are moderate; however, what is notable here is that the relationship between Social Support and the other skills is weaker. This indicates that Social Support is measuring something related but distinctly unique from the other skills and rightly belongs on its own as a self-perception scale.

Table 5
Intercorrelations of Self-Perception Scales (N = 3,439)

Skill	Realistic Optimism	Self-Assurance	Self-Composure	Problem Solving	Goal Orientation	Courageous Communication	Social Support
Realistic Optimism	1.00						
Self-Assurance	.64	1.00					
Self-Composure	.61	.50	1.00				
Problem Solving	.46	.60	.42	1.00			
Goal Orientation	.53	.54	.42	.63	1.00		
Courageous Communication	.44	.54	.29	.52	.48	1.00	
Social Support	.38	.29	.18	.27	.30	.26	1.00

Face Validity

Face validity assesses whether the test appears valid to respondents. In other words, do participants view the assessment as a good measure of resilience? While face validity is not necessary for validity evidence, it’s important because participants are more likely to accept their profile feedback when they feel good about the assessment.

The Adaptive Mindset for Resilience assessment demonstrates good face validity. All of the items are clear and distinctly link back to the Negativity Bias and Resilience Skills. This is not to suggest, however, that respondents will understand how the items are combined into the various scales.

Resilience Skills Norms

Normative scores, or norms, are statistics that describe the performance of a well-defined population (e.g., people from the same country). Norms are a reference point that participants can use to compare themselves to others. For example, norms allow you to say that you are more Self-Assured than 66% of the U.S. population.

To create norms, we look at all the data in our database and statistically divide the data into thirds. If participants score in the bottom third on a skill, this is an “Undeveloped Source of Resilience.” If they score in the middle third, this is a “Secondary Source of Resilience,” and if they’re in the top third they have a “Strong Source of Resilience.”

Table 6 shows the norms for the global population. Overall, the results of the norm group are skewed toward the high end of the response scale. This supports our belief that the bar for having a “strong” source of resilience is, and should be, high.

Table 6
Global Norms (N = 3,439)

Scale	Number of items	Undeveloped	Secondary	Strong
Realistic Optimism	5	5.00 - 24.74	24.75 - 26.49	26.50 - 30
Self-Assurance	5	5.00 - 25.32	25.33 - 26.99	27.00 - 30
Self-Composure	5	5.00 - 23.74	23.75 - 25.79	25.80 - 30
Problem Solving	5	5.00 - 24.62	24.63 - 26.32	26.33 - 30
Goal Orientation	5	5.00 - 24.59	24.60 - 26.24	26.25 - 30
Courageous Communication	5	5.00 - 24.25	24.26 - 26.32	26.33 - 30
Social Support	5	5 - 23	24 - 26	27 - 30

TRACOM regularly updates norms (typically yearly), adding new countries as data becomes available. In addition to the global norm, we have norms for multiple countries and regions.

Research and Development of the Negativity Bias

The assessment of a person's Primary Negativity Bias is a new addition to the measure and profile. It was added because understanding this bias and how it affects one's adaptability and resilience is critical. In previous versions of our programs, participants underwent an informal self-assessment to try and determine their most common Negativity Bias pattern. The newest profile provides a formal assessment of the Negativity Bias, along with strategies for overcoming this bias. In addition, the Resilience Skills are linked back to the Negativity Bias as providing ongoing ways to prevent the Negativity Bias from triggering or recovering when it is triggered.

THE NEGATIVITY BIAS EXPLAINED

So, what is the Negativity Bias? It's part of our neurobiology and is an adaptive mechanism that was meant to keep us safe from danger and threats, and it causes us to focus more on what is going wrong than what is going right (Baumeister, et al., 2001). It has a profound effect on our ability to adapt to change and respond productively to everyday stressors. When you experience the "fight, flight, or freeze" response, that is your Negativity Bias triggering your brain that you are under threat. It evolved to keep us safe from physical dangers but in modern times it is often triggered by perceived threats to our psychological safety, such as feeling disrespected, unheard, put under unreasonable time pressure, and so on. For a more in-depth discussion of the Negativity Bias, see TRACOM's Adaptive Mindset for Resilience programs and facilitator materials.

RELIABILITY AND VALIDITY OF THE NEGATIVITY BIAS

Below, we describe the unique format that was used to assess the Negativity Bias, called ipsative (or forced-choice) measurement. Evaluating the reliability and validity of ipsative measures is different from what is done on normative scales (the type of scale used to measure the Resilience Skills). Resilience Skills are measured on a continuum ("strongly disagree" to "strongly agree") and a person's results are generated by comparing their scores to other people through the use of norms. Therefore, a person's results are given "meaning" by comparing them to others.

The ipsative scale measures a person's Negativity Bias pattern by comparing their results to themselves (their own responses to the questionnaire) rather than against other people. It is a "within person" measure that is used to give insight into one's own thinking, without any comparison to others. Because of this unique measurement format, typical types of reliability and validity assessment are unusable.

Before describing the measurement format in more detail, we'll discuss how the Negativity Bias model was developed, using content validation.

Content Validity of Negativity Bias Patterns

Content validity is a type of validation used for new measures. It ensures that the items fully measure the construct, in this case Negativity Bias patterns. The process involves a thorough review by experts to ensure that the measure encompasses the relevant aspects of the construct. For ipsative scales, content validity is the most important type of validation because it ensures that we're measuring what we intend to measure – people's Negativity Bias patterns. Statistical forms of validity, such as factor analysis, cannot be computed on ipsative scales (Hough & Ones, 2001). Since the single purpose of this assessment is to give people insight about their Negativity Bias pattern, without any comparison to others, content validity is paramount.

We relied on decades of research from Cognitive Behavioral Therapy (CBT) to formulate our measurement of the Negativity Bias. CBT is a form of psychological treatment that is effective for a range of problems (Beck, A., et al., 1979). Research has shown that CBT leads to significant improvement in functioning and quality of life. In fact, when compared to medication, it's been found to be as, or even more, effective for helping people manage problems like depression and anxiety (American Psychological Association, 2017).

CBT research and clinical observations have documented different patterns of “automatic negative thoughts” that people have as a result of being affected by the Negativity Bias. Recognizing these thoughts is central to managing depression and anxiety.

We convened an expert panel of six individuals to develop our measure: two are psychologists and the other four have many years of experience with the Adaptive Mindset for Resilience programs and have helped design previous versions of the programs. To lead our content validation, two psychologists, both with over 25 years of professional experience, and who have expertise in both clinical and organizational applications, reviewed the research on automatic thoughts.

We found that many of the automatic thinking patterns are similar, with only discreet differences in their descriptions. For example, “labeling” is assigning negative traits to yourself (“I’m a terrible person”), and “unfair comparisons” is comparing yourself to others (“she’s better than me”). Based on previous versions of TRACOM’s model and experience from our programs, we found that participants have difficulty making such subtle distinctions, and since some of the patterns are so similar, we combined some of the patterns and used only the most common patterns in our model. This resulted in six Negativity Bias Patterns:

- 1) Assuming: assuming the worst without evidence; thinking that single negative events apply to your entire life. (*“This happens a lot to me; I fail most of the time.”*)
- 2) Blaming: blaming others for negative events and not taking appropriate responsibility. (*“My presentation was a disaster and it’s my co-workers’ fault.”*)
- 3) Catastrophizing: believing that what happened or will happen will be awful; wondering about “what if” something happens. (*“If I do poorly on this project, my career will be ruined.”*)
- 4) Comparing: interpreting events using unrealistic standards; focusing on others who seem to do better. (*“My peers are more talented than me.”*)

- 5) Internalizing: attributing a disproportionate amount of blame to yourself when things go wrong, and failing to see that some events are out of your control. (*"It's all my fault we didn't meet our goals."*)
- 6) Magnifying: magnifying the negatives and minimizing the positives; thinking about how things *should* be, rather than on what *is*. (*"I got lucky that one time, but most of the time I fail."*)

This model is thorough in that it represents the most common Negativity Bias patterns and is simple enough for people to assess themselves and use in everyday practice.

Measuring Negativity Bias Patterns

Measuring Negativity Bias patterns presented a unique challenge. We had to determine how to measure people's private thoughts and reactions to negative events. To guide us we consulted existing research and measures of negative automatic thoughts, which come entirely from clinical psychology research and are used to assess depressive and anxious thinking. These questionnaires typically contain a number of statements that describe negative thoughts ("I'm no good"), with the respondent rating them on a frequency scale ("not at all" to "all the time"). What's being assessed is the frequency of negative thinking, not the specific pattern of thinking (Internalizing).

Since we needed to assess the specific Negativity Bias pattern, we required a different solution. We decided to use a forced-choice measure (also known as ipsative measurement). Respondents are presented with a general situation of a negative event along with six response options that represent each of the six Negativity Bias patterns. The respondent chooses the one option that is "most like me." Below is a sample item.

When things aren't going well, I...

	Most like me
Think the past just keeps repeating itself.	
Think others are mostly to blame for what's happening.	
Expect that things will probably get even worse.	
Think that others are probably doing better than me.	X
Am hard on myself and think it's my own fault.	
Think I should do better, no matter what the circumstances.	

Every item has unique response options, but they measure the same six Negativity Bias patterns. The two psychologist experts wrote the items and response options to correspond with each Negativity Bias pattern. Four other individuals, all with years of experience teaching and helping design the Adaptive Mindset for Resilience programs, were consulted to comment on the items, which were refined for clarity. A final pool of items was chosen that fully covers the content domain, with over 80 unique response options that measure the six Negativity Bias patterns.

Scoring Negativity Bias Patterns

When respondents complete the assessment, it is scored adaptively. This means that the number of items a person responds to can vary across individuals. For example, one person might answer five items while a different person might answer ten items. This is how the adaptive algorithm works: Once a person chooses three of the same Negativity Bias pattern, the questionnaire is finished and the person is assigned that pattern. For example, once a person chooses the Assuming pattern three times, they are assigned Assuming as their Primary Negativity Bias. Therefore, the minimum number of items that a person will complete is three. The maximum number of items a person will complete is thirteen (mathematically, after 13 items a person will have to choose the same Negativity Bias pattern three times).

Forced-choice questionnaires can be challenging for respondents because they are being forced to choose between six relatively undesirable options. We achieved a balance of having confidence in the outcome without overburdening respondents with a large number of items. Also, we provide participants with the option to create a different Negativity Bias profile for themselves if they wish. They can do this after they've completed a program by logging into the Resilience Navigator™ through tracomelearning.com, an online tool that's used as a follow-up to a program. Participants simply decide on a different Negativity Bias and can create a profile showing their results. We decided to allow this because people commonly experience different patterns of automatic thoughts depending on the situation. This is normal. For example, it's possible that a person could engage in "comparing" some of the time and "internalizing" some of the time. We wanted people to understand the effects of their thinking in different situations when they engage in different patterns.

It's important to reiterate that ipsative measurements are not normed. Respondents are assigned a primary pattern based solely on their own responses, without comparison to any population. Therefore, while norms are used for the Resilience Skills section of the assessment, they are not used for the Negativity Bias section.

Reliability of the Negativity Bias

As noted previously, traditional reliability measures are not useful for ipsative measures. For instance, internal consistency was used to show the reliability of the Resilience Skills, but we cannot use this measure for the Negativity Bias.

It's important to recognize that reliability for ipsative measures is somewhat immaterial. The most important type of reliability would be retest reliability, showing that a person's results are consistent over time. For example, if a person truly has an Assuming Negativity Bias pattern, then this shouldn't change over time. However, since the whole point of training is to change people's automatic thoughts to be more productive, we can assume that a person might change their pattern upon re-assessment. Suffice it to say that the most important type of research evidence on this measure is the content validation that was used in its development; as long as the assessment is accurately measuring the Negativity Bias, this is what is most important.

Resilience and Job Performance

TRACOM has conducted research showing the connection between resilience and job performance. We studied data from 322 training participants (all leaders) who were rated by their teams on both resilience and other important skills including:

- Initiating change
- Building positive culture
- Managing stress

We compared people with “Strong” (high) Resilience Skills to people with “Undeveloped” (low) skills and found that people with high skills outperformed the other leaders by more than 20% in some areas, including their positive influence on others.

In the chart below, the percentage is the difference between the high group average and the low group average for each performance measure. For example, an item asked if the leader is “comfortable initiating change when needed.” The Undeveloped group average was 4.5 and the Strong group average was 5.4, representing a 20% difference in effectiveness.

Performance Measure	% Increase with Resilience Strength
Stressful situations do not take a personal toll	22% increase
Positively influences others during times of change	21% increase
Comfortable initiating change when needed	20% increase
Helps build a positive culture	18% increase
Consistently performs at a high level	16% increase
Initiates appropriate action to challenges at work	15% increase
Finds opportunities in workplace challenges	15% increase
Actively supports change when it occurs	15% increase
Stays engaged in work during times of high stress	14% increase
Embraces change rather than resisting it	14% increase

This research corroborates multiple other studies showing the importance of resilience for positive work outcomes.

Training Evaluation

TRACOM has collected data to evaluate the effectiveness of the Adaptive Mindset for Resilience program. A sample of 30 employees from a multi-national restaurant chain attended the program and completed a survey one week later about the attitudinal and behavioral changes they experienced.

These individuals were a mixture of individual contributors, supervisors, managers, and executives. While this sample size is small, results are encouraging, showing that the program is positively affecting participants' attitudes and behaviors.

Participants responded to the following items on a scale ranging from (1) Strongly Disagree to (6) Strongly Agree:

“Since attending the ‘Adaptive Mindset for Resilience’ program, I am better able to:”

	Percent of respondents who agreed or strongly agreed
Remain flexible when things change	80%
Maintain good relationships with co-workers	80%
Deal with challenges	77%
Support changes at work	77%
Control negative emotions when working with customers and co-workers	73%
Accept feedback at work	73%
Feel empowered in my role	70%
Stay motivated to perform well at work	70%
Stay engaged with my work	67%
Remain calm in stressful situations	67%
Remain energized at work	57%

Participants responded to the following items on a scale ranging from (1) Much less often to (5) Much more often:

“Since attending the ‘Adaptive Mindset for Resilience’ program, I:”

	Percent of respondents who indicated more or much more often
Provide help to my colleagues	77%
Display gratitude	77%
Recognize my negative automatic thoughts as they arise	73%
Challenge my automatic negative thoughts when they arise	73%
Replace automatic negative thoughts with more realistic thoughts	73%
Set goals to help me deal with challenges	70%
Make an effort to stay in the present moment during stressful times	70%
Exercise mindfulness to reduce my stress	67%
Give my time or expertise to others	63%
Use power poses to deal with stressful situations	63%
Monitor my progress on goals	60%

This research supports the effectiveness of the program for influencing people’s thinking, behavior, and job performance.

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