

An introduction to the Trait Personality Inventory

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Abstract

This article introduces the Trait Personality Inventory (referred to simply as *Trait*), designed and published online by Aston Business Assessments. Trait is a measure of 13 personality dimensions, which are used by practitioners and clients in a range of settings including recruitment and selection, employee and leadership development, and coaching. I provide an overview of Trait and the practical set-up of the tool, including the reports available to practitioners. This is followed by reliability and validity evidence, highlighting the scientific foundations and practice implications from research using Trait. Finally, example cases of clients using Trait in different sectors and assessment settings are described, highlighting relevant implications for using the tool in practice and applications of personality assessment more widely.

Keywords: Trait Personality Inventory, personality assessment, trait measurement, employee development, recruitment and selection, online assessment

Introduction

This article introduces the Trait Personality Inventory, designed and published online by Aston Business Assessments, providing an overview of the tool and its application. A summary of the design of the Trait inventory and its set-up for practice work is described in the first part of the article. This is followed by a discussion of the scientific foundations of the tool and example cases of where it has been applied by clients in different assessment settings.

Aston Business Assessments (ABA) was set up as a work and organizational psychology consultancy and assessment developer in 2010, with the idea of *simple, effective assessment solutions* embedded in approaches to work with clients. This ethos motivated the design and development of the Trait Personality Inventory (referred to simply as Trait), which is introduced in this article. Two guiding questions framed the design of Trait:

- What are the most important characteristics to measure for assessment at work and in organizations?
- How could these be measured and presented in a simple and accessible way, whilst maintaining psychometric robustness of the instrument?

The Trait Personality Inventory is a 127-item measure of 13 dimensions of personality (see Table 1). The inventory has been designed specifically for use in occupational and work-related settings for the primary purposes of recruitment and individual development. However, the instrument is also applied in a variety of other settings, for example vocational education, coaching, performance management, high potential management and succession planning.

The item set for Trait was constructed following a deductive approach (see Burisch, 1984) with item trialling proceeding over two studies to reduce the initial item pool from 261 to the final 127 items. The inventory was designed to cover the 'Big Five' personality domains (Extraversion, Agreeableness, Conscientiousness, Emotional Stability and Openness, Goldberg, 1990) to provide comprehensive coverage of personality space. The scale structure was then designed to provide an optimal level of detail and granularity, sitting between the higher-order Big Five domains, and narrower lower-level facets measured in instruments such as the NEO-PI (Costa & McCrae, 1992). This structural design was adopted based on evidence in the literature of stronger criterion validities of personality traits measured below the broad Big Five domains (e.g., Paunonen & Aston, 2001). Measuring sub-dimensions of the Big Five also permits easier matching of key traits to job requirements in practice, which, in turn, improves validity (see e.g., Hogan & Holland, 2003). Each Big Five dimension was therefore represented in two sub-dimensions, and a further three dimensions relevant to workplace assessment were also included, giving the final 13-dimension structure (see Table 1). The workplace assessment dimensions were identified based on research literatures on individual differences and criterion effects at work: Sensitivity (e.g., as a component of trait emotional intelligence; Petrides, 2009), Achievement (e.g., Vinchur, Schippmann, Switzer & Roth, 1998), and Optimism (e.g., Avey, Luthans, Smith & Palmer, 2010).

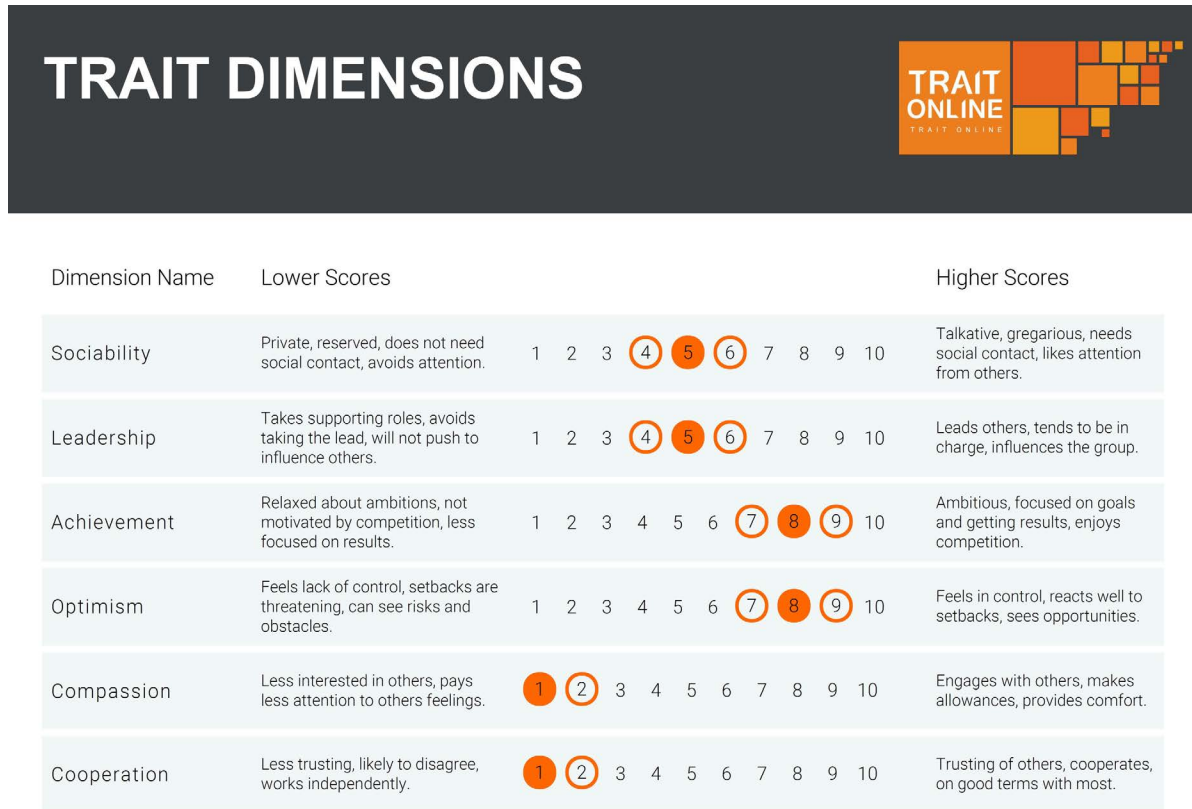
Table 1
Dimensions of the Trait Personality Inventory

Dimension	Description The extent to which:
Sociability	someone seeks and enjoys social interaction with others, how likely they are to initiate and develop social contacts and are comfortable doing so.
Leadership	people prefer to take a higher profile in groups, to be socially ascendant, to seek recognition and to lead others to achieve.
Optimism	people feel generally positive and in control of their world, and people's expectations about their own successes.
Achievement	people are ambitious, competitive, and achievement-oriented in respect of goals and objectives.
Compassion	people are interested in and affected by the problems and feelings of others.
Cooperation	people prefer to cooperate with others at work, and to help others without expecting or seeking something in return.
Sensitivity	people are attuned to emotions, and aware of them in themselves and others.
Orderliness	people are organised and rule conscious, prefer to work according to plans, and conduct activities in a methodical and orderly manner.
Industriousness	people are reliable, hardworking, and committed to finishing tasks and projects they start.
Stability	individuals appear relaxed and carefree, versus anxious, worrisome or apprehensive, particularly in response to pressure or challenges.
Calmness	people are generally calm, tranquil, and less bothered by irritation, anger or frustration.
Culture	people enjoy new experiences and are generally positive about change and working in new cultures.
Intellect	people are intellectual, and interested and open to abstract or theoretical ideas, or complex problem-solving.

Trait is a normative instrument, in which standardized scores are produced through comparison with established norm groups. Respondents use a 5-point Likert scale (1= *Strongly Disagree* to 5 = *Strongly Agree*) to indicate their agreement with each of the 127 statements. Scales are constructed using a mix of positively and negatively keyed items to ensure that the opposing poles of each dimension are adequately captured. The items are designed around a common stem to enable easy reading, making the average completion time for respondents whose first language is English, around 10–12 minutes. For the purposes of client feedback, scale scores are presented on the sten scale (see example in Figure 1).

Figure 1

Example summary page presentation of scores on six of the thirteen trait dimensions (from the Trait Selection Report)



Trait is hosted on a dedicated assessment platform (Trait Online), which enables clients to access the assessment for use with respondents. A series of output reports are also accessible to clients, explaining the implications of the assessment scores for work behaviour, performance and development. Reports are designed to be easy to use and understand, and include features such as interview questions for selection, likely development needs and possible interventions and solutions to explore with respondents. Specific reports are available for practitioners for use in different settings (see Table 2).

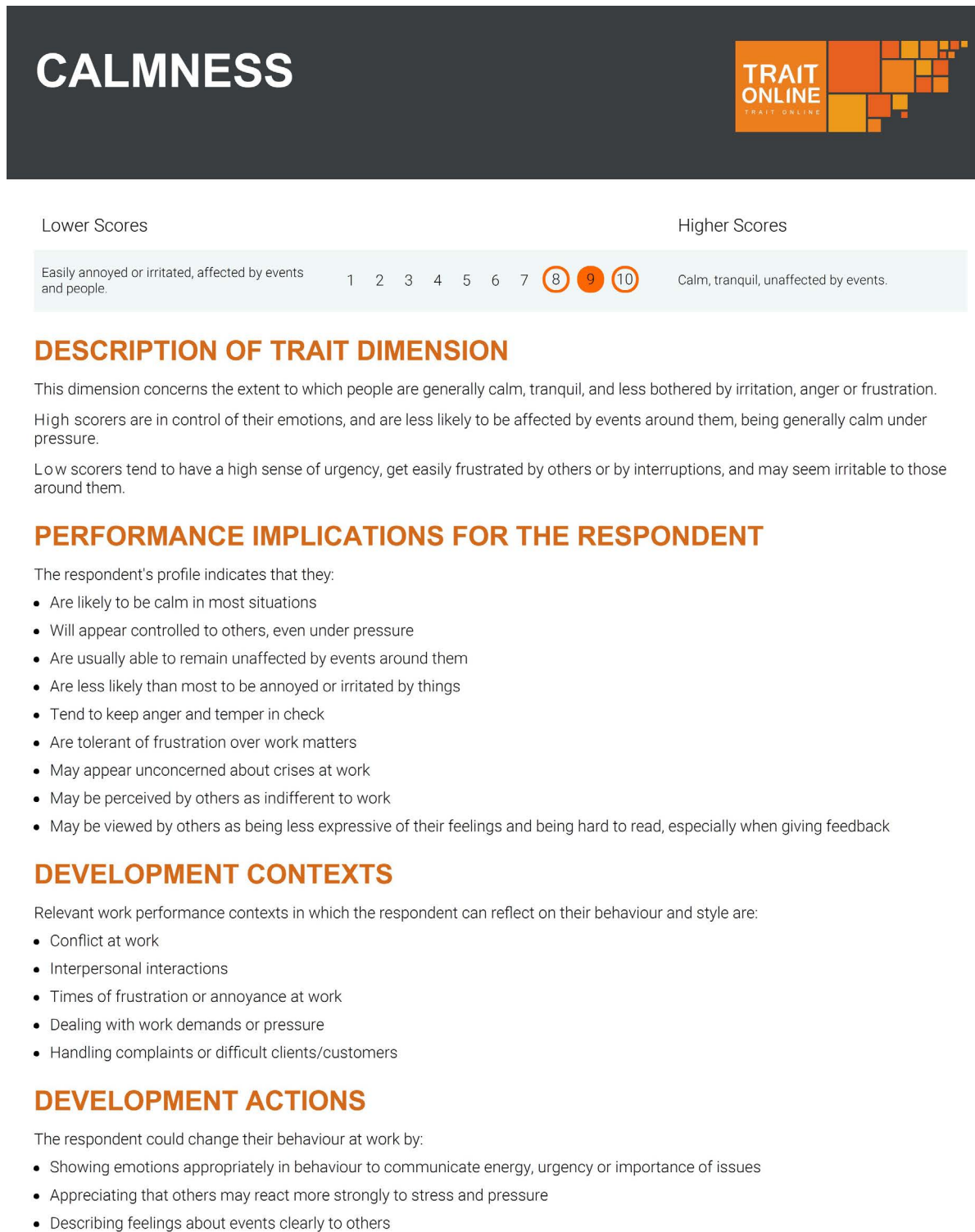
Evidence and theory are used to inform the content and structure of the output reports. For example, the *Trait Development* report (see example page in Figure 2) draws on Trait Activation Theory (Tett & Burnett, 2003) and identifies the work contexts within which each dimension can be explored with respondents (e.g., social and interpersonal settings with dimensions such as Sociability and Cooperation).

Table 2
Types of reports for the Trait Personality Inventory

Report	Features and Practice Area
Trait Selection Report	Full Trait profile, detailed descriptions of performance implications, and suggested interview questions. For use in recruitment and selection assessments.
Trait Development Report	Full Trait profile, detailed descriptions of performance implications, and suggested development recommendations. Designed for use in employee development and training (e.g., one-to-one feedback and coaching, or group development).
Competency Insights Report	Scores on nine job competencies, descriptions of behavioural implications, detailed recommendations for development through coaching, on-job development and training. For use in competency-based assessment systems and in selection and development programmes.
Trait Leadership Evaluation	Scores on ten leadership competencies, descriptions for behavioural implications and guidance for development. For use in leadership development programmes, and one-to-one executive coaching.
Assessor Exploration Guide	Fully structured guide to providing developmental feedback from the Trait Personality Inventory, including scripted discussion prompts to explore the Trait dimension scores. For use in one-to-one feedback and developmental discussions with respondents.
Trait Sales Profile	Short version of Trait focusing on six competencies needed for sales work, including performance implications, and selection recommendations. For use in recruitment and selection in sales settings.
Trait Respondent Summary Report	Short, narrative-only (i.e., no scores shown) summary report to provide written feedback to respondents. For use in settings where brief feedback to respondents is needed, but face-to-face feedback may not be possible.
Trait Scan	Short report that provides scores on the 13 Trait dimensions, and short descriptions of behavioural implications. For use when a brief overview of the Trait profile is required.

Figure 2

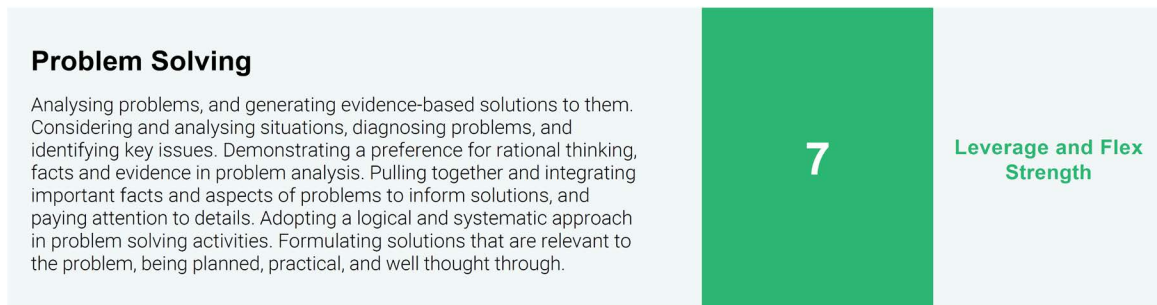
Example page showing profile detail and developmental guidance for the Trait dimension *Calmness* showing contexts and recommended actions (from the Trait Development Report)



To enable improved integration with organizational assessment systems, the 13 Trait dimensions are conceptually mapped to competency dimensions. These competency dimensions may be thought of as compound personality constructs, comprised of two or more individual personality scales (combined as unit-weighted; see Woods & Anderson, 2016). For example, the competency *Problem Solving* (see Figure 3) is derived from the scales *Intellect* (relevant for problem analysis) and *Orderliness* (relevant for developing practical and systematic solutions to problems). The *Competency Insights* report includes detailed explanations of the implications of the Trait assessment in nine competency areas.

Figure 3

An example competency (*Problem Solving*) from the Trait Personality Inventory



The *Trait Leadership Evaluation* report (see Figure 4) presents ten leadership competencies, covering key areas of leader behaviour (managing self, managing teams, managing strategy and change). This report is especially suitable for leadership development, coaching and selection.

An early innovation in the Trait system was to also undertake bespoke or customised assessment design for clients. This typically involves mapping client competencies to the Trait scales, or in some cases reconfiguring the composition and scoring of the dimensions to focus content and attain an optimal fit with client competency models. This is a key advantage of the increasing digital flexibility of psychometric assessment (see Woods, Ahmed, Nikolau, Costa & Anderson, 2020). ABA have provided bespoke forms of the Trait inventory and its outputs for multiple clients and industries.

Validity studies using Trait: Applied implications

Several validity studies examining the effectiveness of the Trait assessment in organizational settings have been carried out, and ABA continually update validity evidence directly with clients. Further information on the studies briefly mentioned here

can be requested from ABA (see www.astonassessments.com). Fundamental aspects of reliability and construct validity were evaluated in a sample of 1273 participants from the UK general working population. These studies confirmed the internal consistency (α ranging from .76 to .85) and test-retest reliability (α ranging from .72 to .89) of the 13 scales, and the underlying higher-order five-factor structure.

It is critical that personality assessments for use in organizational settings are evaluated to establish their criterion-related validity. Trait was designed to be applicable across different occupational groups, capturing a range of characteristics that would be more or less relevant in different settings. Reflecting this objective, validity data have been sourced from a range of occupational groups and for general and specific criteria.

In a study of general job performance, a sample of 277 employed participants (54.2% female, 45.8% male; mean age = 38 years) from a variety of occupational groups (36% management and senior; 7% technical; 26% professional; 13% administrative; 9% sales and customer service; 9% other) completed the Trait inventory and had their performance rated by their immediate line manager. Managers rated performance using scales to measure task performance and organizational citizenship behaviour (individual- and organization focused, Williams & Anderson, 1991). A replication study was also conducted in a single-occupation sample of 70 recruitment consultants.

Across these two studies, the Trait dimensions demonstrated significant positive associations with work performance. Focusing on dimensions relating to Conscientiousness and Agreeableness as relevant to these criteria (Barrick & Mount, 1991; Konovsky & Organ, 1996), three Trait dimensions were found to be significantly associated with performance. These were Industriousness (range $r = .14 - .34$), Orderliness (range $r = .15 - .23$), and Cooperation (range $r = .18 - .27$). These findings underline the utility of personality instruments for predicting general aspects of performance across different jobs. In these results, correlations with performance were stronger for the single-occupation group, highlighting that assessments can be especially useful to understand differences in within-occupation or within-team performance.

In the area of leadership, two example studies have examined the association of personality dimensions measured on the Trait inventory with criteria, focusing on both leader emergence and objective performance delivery. To examine leader emergence, 114 employees in a public sector organization, who were not currently appointed to leadership roles, were rated by their managers on their potential for leadership based on rated characteristics and behaviours. These comprised leaderlike characteristics

(e.g., takes charge naturally; has natural leadership potential), team leadership (e.g., brings out the best in people; embraces and promotes equality and diversity; encourages the sharing of views) and strategic leadership (e.g., communicates a compelling view of the future; forward looking and sets goals). A strength of this study was the use of other-rated leadership potential (i.e., not relying on single-source data), which reflects how prospective future leaders or managers might be noticed and identified in an organizational setting.

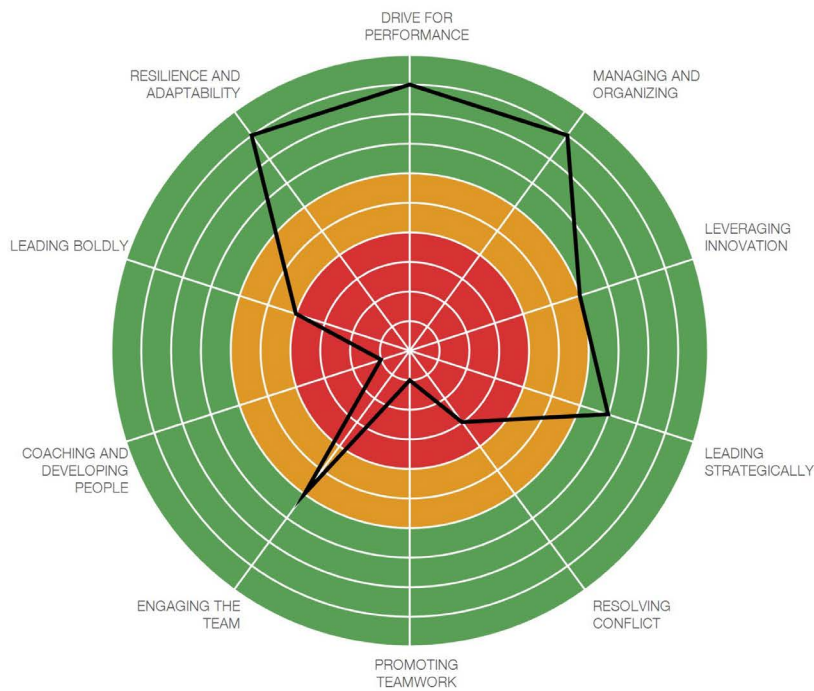
Leaderlike characteristics ratings were positively predicted by the Trait scales Leadership ($r = .27, p < 0.01$), Industriousness ($r = .27; p < 0.01$), Optimism ($r = .34; p < 0.01$) and Stability ($r = .25; p < 0.05$). Team leadership was predicted by Achievement ($r = .21; p < 0.05$) and Stability ($r = .21; p < 0.05$). A notable observation in this study was also the association of Optimism with strategic leadership behaviour ($r = .27; p < 0.01$). These findings could enable practitioners to focus on these kinds of personality traits to help profile future leaders. Such individuals are socially ascendant, committed to work activities, emotionally stable and tolerant of pressure and positive in their approach and outlook.

In a study set in a real-estate agency organization in the UK, 111 business-unit leaders (branch managers) completed the Trait inventory. Their branch (i.e., business unit) performance was then followed up over a two-year period to examine how profitability of the branches were predicted by the managers' personality traits. A combination of traits (e.g., Industriousness, Optimism and interestingly – low Cooperation) were associated with higher objective branch profitability one-year and two-years later. This study highlights the effects that leader personality can have on objective business performance, and cumulatively across a whole organization.

The interesting combination of predictive effects in this study are informative for understanding the role of traits in the sales process. Specifically, income generating activity was predicted effectively by higher scores on the Drive for Results competency, and lower scores on the Working with Others competency. These competencies are pivotal to sales activity and volume, representing motivation to achieve and an assertive, directive sales style. However, as sales volumes increase, so do errors in the sales process (indicated by criteria such as cancellations and compensation). These criteria are negatively predicted by Problem Solving, which appears to act as a buffer on the incidence of errors in the sales process (i.e., better problem-solvers make fewer errors in practice).

Figure 4

Example summary page from the *Trait Leadership Evaluation* showing scores on ten leadership competencies



1. DRIVE FOR PERFORMANCE	9	Leverage and Flex Strength
2. RESILIENCE AND ADAPTABILITY	9	Leverage and Flex Strength
3. LEADING BOLDLY	4	Develop and Improve
4. COACHING AND DEVELOPING PEOPLE	1	Develop and Improve
5. ENGAGING THE TEAM	6	Build and Enhance
6. PROMOTING TEAMWORK	1	Develop and Improve
7. RESOLVING CONFLICT	3	Develop and Improve
8. LEADING STRATEGICALLY	7	Leverage and Flex Strength
9. LEVERAGING INNOVATION	6	Build and Enhance
10. MANAGING AND ORGANIZING	9	Leverage and Flex Strength

In summary, these empirical studies provide indication of the effectiveness and suitability of the Trait assessment for use in selection and development activities with a range of occupational groups. The accumulated findings also give confidence to psychologist practitioners of the validity of assessment in real organizational settings. In all aspects of practice with personality instruments, it is important that they are utilised to support overall consultancy interventions, and not be seen as a method in isolation. This involves practitioners examining focal issues such as selection decisions, performance development, or learning interventions based on evidence from a range of sources (e.g., other selection assessments, performance records). These validity studies offer implications for how personality tools can be integrated into a variety of such activities (for example in general selection and development, leadership succession planning and development, or recruitment in sales).

Trait in practice with client organizations

An important objective at ABA is for the use of assessment tools to make a positive impact in organizations. Indeed, working through consultancy organizations is an often-overlooked way in which research-oriented psychologists can make an impact. In this respect, ABA has been highlighted as an exemplar (see Hughes, Davis, Robinson & McKay, 2021). The scale of impact of assessment tools depends upon the ways in which they are applied. To illustrate, example client engagements are highlighted, based on two sectors: health and financial services.

In the health sector, Trait has been used to support selection of consultant-level doctors in the UK National Health Service. This example illustrates how assessments can broaden the scope of selection decisions to capture new criteria. The use of Trait in this setting provided clients with a means to explore in a more structured way general competencies around interpersonal interaction, supervision and management that complement the key technical and medical competencies of candidates. The client in this case was seeking to establish a way to assess a broader range of criteria in their selection processes, given that senior doctors have a significant impact on the teams they work in through their interpersonal behaviour as well as technical skill. This recognises that senior doctors have an influence on the culture and climate of teams and organizations as a whole through their work behaviour, and the use of Trait to profile typical behavioural styles helps to ensure that hiring decisions lead to more positive outcomes.

Staying in this sector, Trait has recently been applied in social care settings for the recruitment of front-line carers. This project involved adaptation of the instrument to measure seven key care qualities. The benefit of using the assessment tool in this setting has been multifaceted. For example, the managers conducting the recruitment are able to use output reports to improve their hiring processes, broadening the scope of the areas they assess in interviews, and are building in a new selection method. There are also benefits for candidates. Those completing Trait during the hiring process were found to be more likely to show up for the interview and around 80% reported that they planned to use the applicant feedback received as part of their career development. This is an example of improving applicant engagement in selection through the use of such tools.

In the financial services sector, a multinational client in the South-East Asian region, operating from Malaysia and Singapore, has used the Trait assessment for the past eight years to recruit agency staff and team leaders into their organization. The original engagement with this client was to support an organizational development and change programme, helping managers to recruit people with key traits, promoting the new behaviours that were core to the organization's strategy. This client uses the full Trait inventory and a reduced-item reconfigured version to support different areas of recruitment. It has enabled a standardised approach to recruitment to be adopted across distributed business units and provided opportunities for better engagement with hiring managers and candidates.

Periodic reviews and evaluations of performance data with this client have shown the positive impact of the assessment for the business and have set the foundation for long-term impact and a strong client relationship. It is a collaborative relationship in which mutual and reciprocal exchange of ideas and learning have resulted in a solution that is effective for the client and the culture in which the assessment is applied. This shows how psychologists can bring tools to practice with clients to make an impact in their specific context, by focusing not only on the technical aspects of psychometrics, but also on the practical and contextual factors that determine their effectiveness.

Final reflections and conclusions

This article has introduced the Trait Personality Inventory and reviewed its design and features, relevant validity studies and examples of application with clients. Further information about using Trait is available from the author by request, or on the ABA website.

Trait has been designed to be used in a variety of work settings and set up as a digital assessment with output reports that allow users to apply it in different practitioner activities. Experience of working with clients with the Trait inventory over more than ten years has underlined the versatility and utility of personality tools in practice. A final reflection on this experience is that the applied skills and competencies of practitioners are consistently key to making an impact with psychometric tools – tools make a difference not only as a function of their psychometric design, but through the ways in which they are put into action. The client cases and example studies reviewed here illustrate ways in which the effective use of Trait, or other personality assessments, can make a positive impact in businesses and organizations.

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