

# Construct Validity of ACT Tessaera Workforce

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As workplaces begin to focus on essential (or “soft”) skills to meet the demands of increasingly adaptive and collaborative work environments, it is important to consider what types of skills can best predict employee success in these contexts. ACT® Tessaera® Workforce is an assessment of essential skills, which are skills outside of cognitive ability that predict important work outcomes such as job performance (Barrick & Mount, 1991; Barrick, Mount, & Judge, 2001; Hurtz & Donovan, 2000; Tett, Jackson, & Rothstein, 1991), organizational citizenship behaviors (Chiaburu, Oh, Berry, Li, & Gardner, 2011), counterproductive work behaviors (Salgado, 2002), and turnover (Zimmerman, 2008).

Although there are many frameworks to explain and measure essential skills, the Big Five Model of personality has emerged as the frontrunner of these frameworks. The

Big Five framework has been replicated in many countries and languages (McCrae & Terracciano, 2005), and nearly all essential skills can be aligned with the Big Five personality factors (Goldberg, 1993). For these reasons, ACT Tessaera’s development team utilized the Big Five taxonomy when developing ACT Tessaera Workforce, basing five of the six scales on the Big Five traits: Work Ethic, Collaboration, Resilience, Creativity, and Leadership. The sixth skill, Integrity, was based on the Honesty-Humility factor of the HEXACO model, which provides incremental validity above and beyond the Big Five and cognitive ability (Johnson, Rowatt, & Petrini, 2011; Lee & Ashton, 2005, 2014; Wiltshire, Bourdage, & Lee, 2014). A crosswalk linking the ACT Tessaera Workforce skills with their respective Big Five and HEXACO constructs can be seen in Table 1.

**Table 1.** ACT Tessaera Workforce Skill Definitions and Crosswalk

ACT Tessaera Workforce Skill	Big Five/HEXACO Construct	ACT Tessaera Workforce Skill Description
Work Ethic	Conscientiousness	persistence, goal striving, reliability, dependability, and attention to detail
Collaboration	Agreeableness	empathy, helpfulness, trust, trustworthiness, and the ability to work on teams
Resilience	Emotional Stability	stress management, emotional regulation, positive response to setbacks, and poise
Creativity	Openness to Experience	creative thinking, inquisitiveness, flexibility, open mindedness, and embracing diversity
Leadership	Extraversion	assertiveness, influence, optimism, and enthusiasm
Integrity	Honesty-Humility	honesty, sincerity, fairness towards others, and modesty



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Validity is defined as the degree to which the interpretation of test scores in a specific context is supported by theory and empirical evidence (AERA, APA, & NCME, 2014). When there is strong validity evidence, we can be more confident that we are drawing the correct conclusions from an assessment. In this report, we provide initial results regarding the construct validity of ACT Tesseract Workforce. Construct validity refers to the extent to which a test demonstrates a pattern of association with other variables in a theoretically consistent way (AERA, APA, & NCME, 2014).

A pilot study was conducted using an online sample of 1,768 adults. Participants completed the ACT Tesseract Workforce Assessment as well as two validated, well-

established measures of the Big Five and HEXACO frameworks: the Big Five Inventory (BFI; Rammstedt, 2007) and HEXACO-H (Lee & Ashton, 2018). Because each ACT Tesseract Workforce skill was designed to theoretically align with its corresponding Big Five or HEXACO factor (see Table 1), each essential ACT Tesseract Workforce skill was expected to correlate most highly with the trait it was designed to assess (convergent validity), while correlating to a lesser degree with other traits on the BFI and HEXACO-H (discriminant validity). Thus, correlations among the ACT Tesseract Workforce skills and BFI and HEXACO-H constructs were computed to evaluate evidence for convergent and discriminant validity. The full correlation matrix can be found in Table 2.

**Table 2.** Correlations Between ACT Tesseract Workforce Skills and BFI/HEXACO-H

		Big Five Inventory and HEXACO-H Constructs					
		Conscientiousness	Agreeableness	Emotional Stability	Openness to Experience	Extraversion	Honesty-Humility
ACT Tesseract Workforce Constructs	Work Ethic	<b>.66</b>	.49	.38	.39	.03	.51
	Collaboration	.54	<b>.56</b>	.34	.40	-.01	.58
	Resilience	.56	.45	<b>.70</b>	.41	.23	.36
	Creativity	.51	.50	.36	<b>.58</b>	.21	.38
	Leadership	.40	.34	.53	.48	<b>.68</b>	.09
	Integrity	.53	.49	.33	.34	-.02	<b>.65</b>

**Note.** Correlations at or above .05 in value are significant at  $p < .05$ . Bold values indicate places of highest expected construct overlap.

The results provide evidence for both the convergent and discriminant aspects of construct validity. Each ACT Tesseract Workforce skill correlated most highly with its corresponding trait on the BFI and HEXACO-H, with the exception of Collaboration. The fact that Collaboration correlated slightly higher with Honesty-

Humility rather than the corresponding Big Five trait of Agreeableness is likely due to the fact that the Honesty-Humility trait falls under Agreeableness in the Big Five model. Overall, these results provide good evidence of convergent validity. For discriminant validity, each ACT Tesseract Workforce skill had smaller correlations with

the other BFI and HEXACO-H constructs that it was not intended to measure, aside from the exception noted above. It is important to note that intercorrelations still remained high for some unrelated constructs. However, this is similar to past research findings (Van der Linden, te Nijenhuis, & Bakker, 2010) in which evidence for discriminant validity was less strong than that for convergent validity.

Overall, data from this pilot study showed that each ACT Tessera Workforce skill correlated most highly with its respective Big Five or HEXACO personality construct. This means the skills assessed by ACT Tessera Workforce are statistically related to established measures of the Big Five and HEXACO constructs. These findings provide initial evidence of construct validity for ACT Tessera Workforce.

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