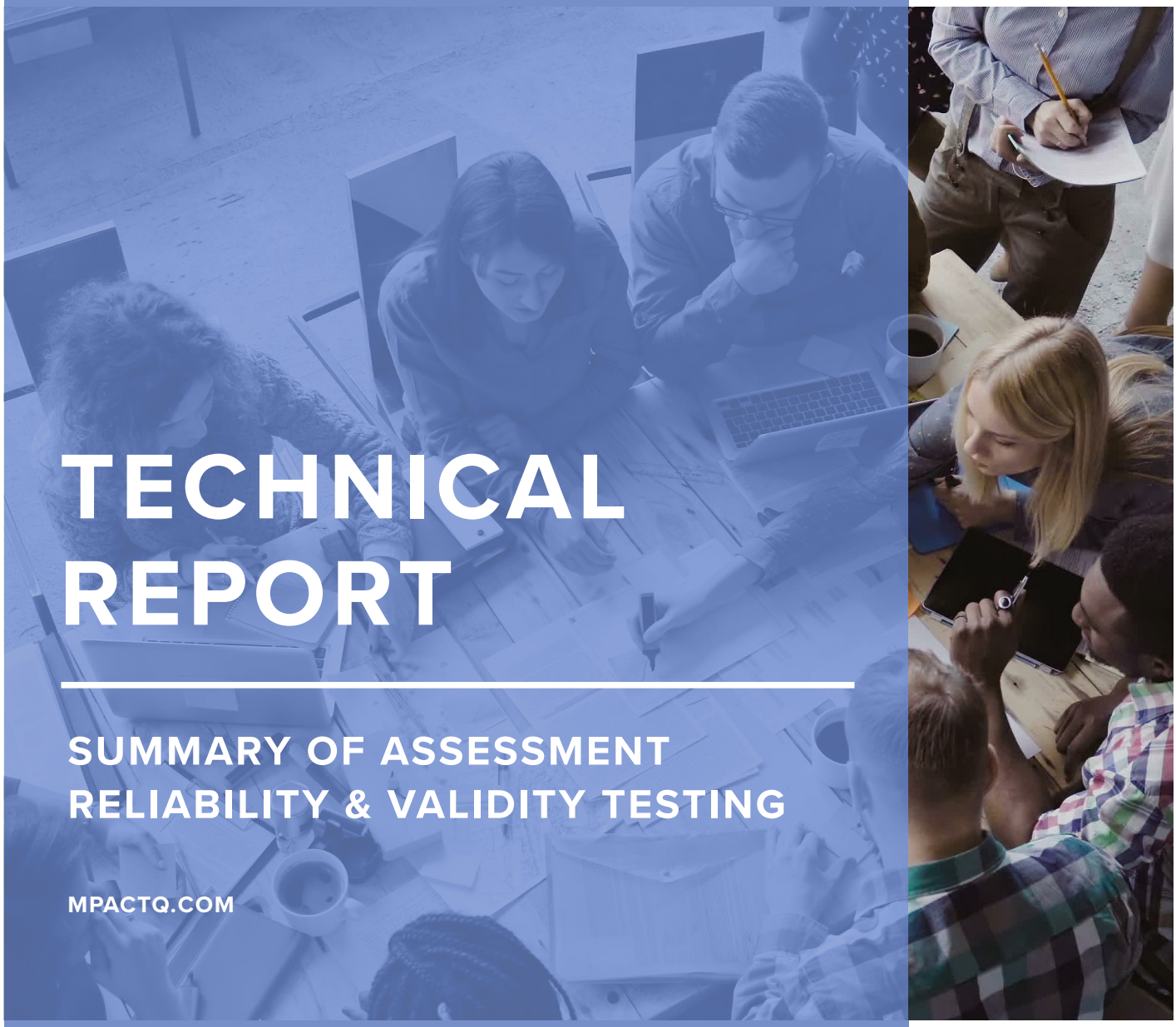

# TECHNICAL REPORT

## SUMMARY OF ASSESSMENT RELIABILITY & VALIDITY TESTING

MPACTQ.COM

MPACT Quotient

## INTRODUCTION

The MPACT Assessment was developed according to current psychometric standards. This report presents evidence of reliability and validity gathered to date, in accordance with The Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 1999). Primary applications of MPACT for vocational development, employee engagement, leadership development, and team development are briefly discussed. The validation research was conducted by Todd W. Hall, Ph.D. of Alidade Research, Inc.

## PREDECESSOR OF MPACT: APEST

Author and teacher, Alan Hirsch, explored the concepts and laid the foundation behind MPACT in a number of books he authored or co-authored. These books include: The Shaping of Things to Come, The Forgotten Ways, On the Verge, The Permanent Revolution, and 5Q. In these books, Hirsch presents theories and evidence explaining the decline of western Christian movements and denominations, one of which is the abandoning of the inherent intelligence built into the Christian Church as described in the Ephesians 4 Bible passage.

Hirsch presents the hypothesis that the majority of churches and denominations are only using a subset of the five equipping intelligences described in Ephesians 4 and that, to re-catalyze Christianity's growth and impact, all five intelligences need to be embraced and activated. To help faith-based leaders identify these intelligences, Hirsch developed an assessment, called APEST, which provides the assessment taker with an understanding of their Ephesians 4 equipping design, namely: **A**postolic, **P**rophetic, **E**vangelistic, **S**hepherding, and **T**eaching.

In his book 5Q, Hirsch extends his theory beyond the Christian Church and explains how the five intelligences are historical archetypes described throughout humankind's existence and found embedded in all forms of cultural expression, such as literature, art, theater, and movies.

With this foundation laid, Rick Newton, Owner/Founder of the Newton Family of Companies, took Hirsch's APEST Assessment and began developing a similar assessment that could be used in a marketplace setting. The result is an assessment that stays true to identifying the equipping intelligences but without using faith-based language that could reduce its acceptance and usage in non-faith-based contexts. For instance, the original 5 APEST quotients were renamed to **M**entoring (Shepherding), **P**ioneering (Apostolic), **A**ligning (Prophetic), **C**hampioning (Evangelist), and **T**eaching (Teaching), each MPACT quotient correlating to one of the APEST quotients.

Additionally, Newton and his team designed MPACT to measure those intelligences across ten categories of individual and team behavior. This framework provides deeper insights around strengths, blindspots, opportunities to grow, and team dynamics, which in turn, enables greater application towards individual growth and improved team performance.

## PHASE 1: FACTOR ANALYSIS TESTING

Item Development

The development of MPACT began in 2018. To capture the content facets within each Quotient, ten categories of human and team behavior were identified.

| # | CATEGORY | DESCRIPTION |
|---|---|---|
| 1 | **PERCEIVING & THINKING** | This is how you perceive situations and how you naturally process, evaluate, and analyze them. It's the part of a circumstance, concept, or idea that naturally catches your attention. |
| 2 | **INTEGRATING & IMPLEMENTING** | This is the way you make decisions about an idea or concept, and prepare to implement it. It is also the part you play in helping the team realize the integration of an idea or concept. |
| 3 | **COMMUNICATION STYLE** | This is the focus of your communication, and the method by which you best convey ideas and obtain support from the team. It is also how you approach and address sensitive topics with others. |
| 4 | **ROLES & FUNCTIONS** | These are the roles you naturally assume, or most want to play, when in a team environment. It is also a description of how you best contribute to a team or organization. |
| 5 | **SERVING OTHERS** | This is how you naturally serve people inside your team or organization, as well as how you serve people outside your organization, such as customers, partners, suppliers, investors, and the community. |
| 6 | **PROBLEM SOLVING** | This is how you naturally identify, define, and communicate a problem that exists. It is also how you naturally analyze and resolve those problems. |
| 7 | **DEFINING SUCCESS & FAILURE** | This is how you define success, or the outcomes that give you joy or energy. It is also how you define failure, or the outcomes that cause frustration or dissatisfaction. |
| 8 | **TEAM CULTURE** | This is what you value or prioritize most within your team or organizational culture. It is also how you are most likely to contribute to a healthy team or organizational culture. |
| 9 | **GUIDING OTHERS** | This is how you positively affirm or support people to help them grow, mature, and reach their full potential. It is also how you guide individuals to restoration and wholeness, and help them overcome dysfunction. |
| 10 | **LEADERSHIP STYLE** | This is the focus you bring to teams and how you naturally lead them. It is also how you naturally support and serve leaders, whether that be your immediate supervisor or a broader leadership team at your organization. |

For each category within each Quotient, approximately six items were written with the goal of retaining four items for the final version of MPACT. These items were written and reviewed by the Newton team in collaboration with Alan Hirsch. They were then reviewed by Dr. Todd Hall. Revisions were then made in collaboration between Newton Consulting and Dr. Todd Hall in order to simplify the items as much as possible. The Phase 1 MPACT Factor Analysis was done through a Research Survey that contained approximately 300 items for testing.

The final version of MPACT scores the items for each category within each Quotient as 0/1 in a forced choice format. However, the purpose of phase 1 was to write items designed to use a Likert scale format in order to: 1) factor analyze the items; 2) select the best four items (out of the five or six items), and test whether they all load together on one factor. A 10-point Likert scale was used, ranging from 1, "Not important at all," to 10, "Extremely important," or in some cases, "1, "Does not describe at all," to 10, "Describes extremely well."

## DATA COLLECTION AND SAMPLE

The Research Survey for this testing was built in Qualtrics and sent out via email to individuals with the networks of Newton Consulting and Alan Hirsch, developer of the 5Q model and APEST. Data were collected during March and April of 2019. The sample consisted of a total of 225 participants.

In terms of gender, the sample was 67% male/33% female.

The percentages of age categories are shown below in **Table 1**. The largest group were Boomers (54-72) at 42%, followed by Gen Xers (38-53) at 32%. These two age groups make up approximately three-quarters of the sample.

### TABLE 1: AGE CATEGORIES

| AGE CATEGORY/ GENERATION | PERCENTAGE |
|---|---|
| **(20-21)** College/Gen Z | 0.4 |
| **(22-29)** Emerging Adults/Young Millennials | 5.3 |
| **(30-37)** Older Millennials | 15.6 |
| **(38-53)** Gen X | 32 |
| **(54-72)** Boomers | 42.2 |
| **(73 and up)** Silent/Great generation | 4.4 |

As can be seen in **Table 2**, a majority of the sample was White, with small percentages of various minority groups represented.

## TABLE 2: ETHNICITY

| ETHNICITY | PERCENTAGE |
|---|---|
| **European American/White** | 83.6 |
| **African American/Black** | 2.7 |
| **Latino/a** | 1.8 |
| **Asian American/Pacific Islander** | 3.1 |
| **Native American** | 0.4 |
| **Other** | 8.4 |

**Table 3** below shows education level of the sample. As can be seen, the sample was highly educated relative to the U.S. population, with 83% holding a bachelor's degree or higher and just over half holding masters or doctoral degrees.

## TABLE 3: EDUCATION

| EDUCATION | PERCENTAGE |
|---|---|
| **Less than 12th grade** | 0.4 |
| **Completed high school** | 1.3 |
| **Some college** | 14.7 |
| **Undergraduate degree** | 32.0 |
| **Masters degree** | 40.0 |
| **Doctoral degree** | 11.6 |

Eighty-four percent of the sample was currently working. As we would expect based on the highly educated nature of the sample, 90% of the participants had 11 or more years of work experience. Our sample was also highly satisfied with their work, with 85% indicating they were moderately or very satisfied.

As can be seen in **Table 4** below, the most common type of organization for which participants worked was a religious organization, at just over 43 percent. Following this, approximately one-quarter worked at a for-profit organization, and just under one-fifth in a non-profit organization. Government and educational institutions comprise the remaining 11 percent.

## TABLE 4: ORGANIZATION TYPE

| ORGANIZATION TYPE | PERCENTAGE |
|---|---|
| For Profit | 24.2 |
| Non-Profit | 17.9 |
| Religious Organization | 43.2 |
| Government Agency | 4.7 |
| Educational Institution | 6.3 |
| Other | 3.7 |

## FACTOR ANALYSIS RESULTS

The goal was to test whether the items within each category-quotient combination comprised a single factor with the items all loading above .30. This would then allow us to combine four items for each category-Quotient into a total score.

Within each of the ten categories, the items for each Quotient were submitted to a separate factor analysis. Five factor analyses were conducted for each category, for a total of fifty separate factor analyses. The procedure used was Principal Axis Factoring with an Oblique rotation.

In all factor analyses, all six items loaded onto a single factor. All items produced factor loadings (pattern loadings, which represent the unique variance of a factor predicting an item) above .30, which is the conventional cutoff for retaining an item on a factor.

For each category within a Quotient we then selected the best four items for the final version of MPACT. We generally selected the items with the highest four factor loadings; however, we also examined item content, and in some cases selected items with slightly lower loadings that had item content that was deemed important to the construct. This allowed us to move forward into Phase 2 testing with confidence that there is strong empirical support to combine the four items into a category score by summing them.

## PHASE 2: TESTING THE BETA VERSION OF MPACT (BETA OF CURRENT VERSION)

As mentioned previously, the goal of phase 2 was to create a new forced-choice format for MPACT and test the category scores within each Quotient. For each category within each Quotient, the four best items were revised into a forced-choice format.

Within each category, there are ten questions that present two items. Participants must choose the item that best characterizes their typical behavior. Items are scored 0 if not selected and 1 if selected. There are twenty separate items presented across these ten questions, allowing for each of the five Quotients to be represented four times. The four items for each Quotient (within a category) are then combined into a total score by calculating their sum. This creates a continuous category score for each Quotient, which ranges from 0 to 4. There are ten category scores for each Quotient. Our goal in phase 2 was to test whether these category scores within each Quotient hang together, comprising a single factor, and allowing for a total Quotient score.

## DATA COLLECTION AND SAMPLE

The survey was built on Newton Consulting's proprietary survey and reporting platform. Data were collected during June and July, 2019, through two networks: 1) the networks of Newton Consulting and Alan Hirsch, developer of the 5Q model and the APEST assessment on which the MPACT is based; and 2) through participants who had taken a separate assessment called MCORE and agreed to participate in further research.

### TABLE 5

| AGE | % |
|---|---|
| LT 18 Years Old | 0% |
| 18 to 21 Years Old | 2% |
| 22 to 29 Years Old | 10% |
| 30 to 37 Years Old | 22% |
| 38 to 53 Years Old | 37% |
| 54 to 72 Years Old | 27% |
| No Answer | 1% |
| | |
| TOTAL | 100% |

### TABLE 6

| GENDER | % |
|---|---|
| Male | 60% |
| Female | 39% |
| Not Specified | 1% |
| | |
| | |
| | |
| | |
| | |
| TOTAL | 100% |

### TABLE 7

| ETHNICITY | % |
|---|---|
| African American/Black | 5% |
| African Nation | 2% |
| Asian/Pacific Islander | 4% |
| European American/White | 81% |
| Latino/South American | 3% |
| Native American | 0% |
| No Answer | 1% |
| Other | 4% |
| TOTAL | 100% |

### TABLE 8

| TYPE OF WORK | % |
|---|---|
| Admin Support | 4% |
| Executive | 18% |
| Laborer/Technician | 2% |
| Management | 15% |
| Not Applicable | 1% |
| NULL | 2% |
| Other | 13% |
| Professional - Creative | 5% |
| Professional - General Admin | 7% |
| Professional - Knowledge Worker | 9% |
| Professional - Service | 13% |
| Professional - Technical | 7% |
| Sales Worker | 3% |
| TOTAL | 100% |

### TABLE 9

| EDUCATION | % |
|---|---|
| Completed High School | 2% |
| Doctoral Degree | 9% |
| Less than 12th Grade | 1% |
| Masters Degree | 35% |
| No Answer | 1% |
| Some College | 11% |
| Undergraduate Degree | 42% |
| | |
| TOTAL | 100% |

### TABLE 10

| EMPLOYMENT STATUS | % |
|---|---|
| Not Working (Disabled) | 0% |
| Not Working (Looking for Work) | 2% |
| Not Working (Other) | 2% |
| Not Working (Retired) | 3% |
| No Answer | 3% |
| Prefer Not to Answer | 1% |
| Working (Paid Employee) | 62% |
| Working (Self-Employed) | 27% |
| TOTAL | 100% |

### TABLE 11

| JOB SATISFACTION | % |
|---|---|
| Moderately Satisfied | 5% |
| Moderately Unsatisfied | 2% |
| No Answer | 4% |
| Slightly Satisfied | 81% |
| Slightly Unsatisfied | 3% |
| Very Satisfied | 0% |
| Very Unsatisfied | 1% |
| Other | 4% |
| TOTAL | 100% |

### TABLE 12

| TYPE OF ORGANIZATION | % |
|---|---|
| Educational Institution | 4% |
| For Profit | 35% |
| Government Agency | 2% |
| Military | 0% |
| Non-Profit | 18% |
| No Answer | 3% |
| Other | 5% |
| Religious Organization | 33% |
| TOTAL | 100% |

A subset of 125 of the participants also completed the MCORE, a validated measure of core motivation, and a short 10-item version of the Big-5 personality inventory. This was undertaken to allow us to conduct correlations between MPACT and these measures in order to test convergent validity. The results from each study are described below.

## RELIABILITY

**The reliability of a scale score is an estimate of its stability, or that part of the score that is not due to random error.** There are two main types of reliability: internal consistency and test-retest reliability. Internal consistency is the most common type of reliability used and we report on this below.

Internal consistency is typically evaluated using Cronbach's alpha coefficient. Cronbach's alpha measures the extent to which all the variables on a scale are positively associated with each other. It is an adjustment to the average correlation between every item and every other item. The alpha is also the average split-half reliability coefficient for all possible splits. A split half reliability is found by randomly selecting half of

the items in a scale, computing the mean to create a composite variable, and then creating a composite variable of the remaining half, and correlating the two composite variables. The expected value for the random split-half reliability is the Coefficient alpha. Nunnally offered a rule of thumb of 0.70 as the cutoff for "acceptable" internal consistency, as shown below in **Table 13**. By definition, scales with fewer items will have lower alphas.

We calculated alpha coefficients for the five Quotient domains, which are comprised of the mean of the ten category scores for that Quotient. It should be noted here that the Quotients are essentially second-order factors as they are comprised of ten category scales. The categories cover a broad range of contexts within a Quotient, thus making it more difficult to achieve internal consistency.

In general, the alphas were acceptable, with an average alpha coefficient of .72. As the chart below shows, three of the five alphas were above the conventional cutoff of .70, with one of those being above .80 (Mentoring). Two of the Quotients had alphas in the .60 to .69 range (Pioneering and Aligning). It is hoped that future research can improve these last two Quotients. However, given the second-order nature of the Quotients, as mentioned above, these alphas were deemed sufficient to proceed with these scales in this version of MPACT.

### TABLE 13: ALPHA DESCRIPTIONS, RANGES, COEFFICIENTS

| ALPHA RANGE | DESCRIPTION | NO. IN THIS RANGE; ALPHAS |
|---|---|---|
| **.90 - .99** | Excellent | |
| **.80 - .89** | Good | 1 (Mentoring = .82) |
| **.70 - .79** | Acceptable | 2 (Teaching = .77; Championing = .70) |
| **.60 - .69** | Questionable | 2 (Pioneering = .67; Aligning = .63) |
| **.50 - .59** | Poor | |

## VALIDITY

**The validity of an assessment provides an indication of the degree to which it measures the construct it is intended to measure.** There are several types of validity. We address here **content validity**, and two aspects of construct validity: **factorial validity** and **convergent validity**. Criterion validity, an indication of the degree to which a scale predicts meaningful outcomes is also important. We do not currently have results for criterion validity; however, future research will address criterion validity, investigating whether MPACT predicts outcomes such as employee engagement and retention, customer satisfaction and leadership effectiveness.

## VALIDITY: CONTENT VALIDITY

**Content validity refers to the degree to which an instrument adequately covers the content domain of the construct.** There is no definitive taxonomy of equipping intelligence themes against which to compare MPACT. However, the Newton Consulting team, in collaboration with Alan Hirsch, reviewed Hirsch's writing on the 5Q model and identified various content facets for each of the five Quotients. In addition, through an extensive process of interviews and discussion with business leaders, the Newton team identified ten categories of human and team behavior. These are described above in a previous section. **Each Quotient, then, covers a broad and thorough range of content facets.** For example, the Mentoring Quotient covers the construct of mentoring through the lens of each of the ten different categories, such as communication style and roles and functions.

## VALIDITY: FACTORIAL VALIDITY

**Construct validity is a broad term that refers to various indicators that a scale measures what it is intended to measure.** There are several aspects to construct validity. Generally the first aspect of construct validity to be addressed is known as factorial validity. This is evaluated through a statistical procedure known as factor analysis. Factor analysis provides an indication of the degree to which the items on a scale "hang together" and measure one, unified construct.

In Phase 2, we conducted a separate exploratory factor analysis (EFA) on each of the five Quotients. We submitted the category scores for each Quotient to a Principal Axis Factoring procedure using an Oblimin rotation.

As noted previously, this is essentially a second-order factor analysis since it was conducted on category scores that are themselves first-order scales. Given the breadth of content covered by the ten categories within each Quotient, we used a slightly lower cutoff for factor loadings of .20 (versus the conventional cutoff of .30). The factor loadings we used and report here were pattern loadings (a statistic produced for each item that provides an indication of how well the underlying factor/construct uniquely predicts the variance of that item).

In all five EFAs for the five Quotients, all the items loaded onto one factor with loadings of .20 or greater. Of the 50 category scores, 43 produced loadings of .30 or greater and seven had loadings in the .20 to .30 range. **This provided sufficient evidence that each Quotient represents a unified construct.**

## VALIDITY: CONVERGENT AND DISCRIMINANT VALIDITY

**Convergent validity is exhibited when a measure correlates with other measures in theoretically predicted ways**. For example, we would expect a measure of depression to correlate positively with a measure of anxiety. If two such measures correlate negatively or not at all, that would suggest at least one of the measures is not measuring what it is supposed to measure. **Discriminant validity** is the flip side of convergent validity. **This is demonstrated when scales do not correlate with other scales that do not overlap much conceptually.**

In a first step to demonstrate convergent and discriminant validity for MPACT, we correlated it with the MCORE and a short version of the Big-5 Personality Inventory due to some measure of conceptual overlap with some of the scales in these assessments. In general, we expected to find small to moderate correlations in the expected direction with certain scales and no significant correlations with other scales.

MCORE is a validated measure of core motivation. It contains 27 motivational themes, which are grouped into six motivational identities: Achiever, Learner, Key Contributor, Optimizer, Team Player and Visionary. We focused our correlations on the six motivational identities rather than the 27 themes to limit the number of analyses. Based on a conceptual analysis of the MPACT and MCORE scales, we expected the following correlational patterns:

- **MENTORING**: will correlate primarily (positively) with Team Player
- **PIONEERING**: will correlate primarily (positively) with Achiever
- **ALIGNING**: will correlate primarily (positively) with Team Player
- **CHAMPIONING**: will correlate primarily (positively) with Visionary
- **TEACHING**: will correlate positively with Optimizer and negatively with Visionary

**Table 14** below shows the correlations with MCORE. The statistically significant correlations are highlighted in yellow. The pattern of correlations generally supported our predictions. The pattern of correlations is important beyond any single correlation. The results show that MPACT discriminates between signal (scales it should correlate with either positively or negatively due to conceptual overlap) and noise (scales it should not correlate with due to lack of conceptual overlap). **This provides evidence that MPACT is measuring what it is intended to measure.**

The correlations in **Table 14** below show that the **Mentoring Quotient** correlates positively and only with the Team Player motivational identity. This makes sense as those who are oriented toward mentoring others are also generally motivated by being team players. The fact that Mentoring does not correlate significantly with the other motivational identities demonstrates discriminant validity.

As predicted, the **Pioneering Quotient** correlated significantly and positively with only the Achiever motivational identity. Those with a Pioneering orientation are motivated to catalyze a team around mission, movement and momentum. This requires a great deal of achievement so it make theoretical sense that the Pioneering Q correlates with the Achieve identity. It also does not correlate with any other identities which provides evidence for discriminant validity.

The **Aligning Quotient** did not correlate significantly with any of the six MCORE motivational identities, although we expected it would show a small to moderate correlation with Team Player as aligning people's character around meaning, purpose and core values fits best with the Team Player motivation. To further investigate the Aligning Quotient, we ran correlations with the 27 MCORE motivational themes. We found significant correlations with four motivational themes: Be Key (under Key Contributor identity; -.15); Organize (under the Optimizer identity; -.20); Serve (under the Team Player identity; .15); and Achieve Potential (under the Visionary identity; -.17). These results generally support the convergent and discriminant validity of the Aligning Quotient. The only significant positive correlation at the theme level of MCORE was with Serve, which is part of the Team Player identity. The correlation is in the small range, but still shows conceptual overlap that makes sense. Furthermore, the small but significant negative correlations also make sense. Aligning correlates negatively with Be Key and Achieve Potential which relate to making unique contributions and visioning. Aligning people's character around a purpose to derive meaning involves a more internal and relational focus than these motivational identities and thus work in tension with each other. The negative correlation with Organize shows that Aligning involves a motivation that works against organizing in some ways. Helping people tap into meaning and purpose is broader than promoting organization. In sum, these correlations with motivational themes provide evidence for the construct validity of the Aligning Quotient.

The **Championing Quotient** exhibited a significant, positive correlation only with the MCORE Visionary identity, as was expected. Championing involves inspiring and connecting people, both inside and outside the team, to the cause at hand. This is essentially a visionary function so this correlation makes sense. The lack of significant correlations with the other MCORE identities also shows that Championing discriminates among the various major motivations represented by MCORE.

The **Teaching Quotient** showed significant negative correlations with Visionary and Team Player. We expected the negative correlation with Visionary. The Teaching Q involves creating a culture of knowledge sharing and continuous learning. This involves more of an internal focus that works against an outward visionary focus. We also expected a positive correlation with Optimizer. We did find a small

positive correlation of .10, although not significant. Instead, we found an inverse relationship with Team Player. This also makes sense as helping people improve and learn may work in tension with providing support and encouragement.

In sum, the pattern of correlations between MPACT and MCORE provide strong support for the validity of MPACT.

## TABLE 14: CORRELATIONS WITH MCORE IDENTITIES

| | MPACT | | | | |
|---|---|---|---|---|---|
| **MCORE** | (M)entoring | (P)ioneering | (A)ligning | (C)hampioning | (T)eaching |
| **Visionary** | 0.041 | 0.033 | -0.048 | .216** | -.199* |
| **Optimizer** | 0.022 | -0.001 | -0.047 | -0.111 | 0.096 |
| **Achiever** | -0.069 | .215** | -0.055 | 0.008 | -0.065 |
| **Learner** | -0.002 | 0.093 | -0.033 | -0.087 | 0.019 |
| **Team Player** | .187* | -0.069 | 0.058 | -0.026 | -.162* |
| **Key Contributor** | 0.01 | 0.064 | -0.114 | 0.11 | -0.063 |

The Big-5 is one of the most widely used and scientifically robust measures of personality. It consists of five main factors: Extraversion, Agreeableness, Conscientious, Neuroticism, and Openness. These five personality factors are expected to overlap to some extent with the five MPACT Quotients, although not as broadly across all five Quotients since the Big-5 taps very broad personality constructs. We treated this analysis in a more exploratory fashion; however, we expected to see a few strong signals represented by the following correlations:

- MENTORING: will correlate primarily (positively) with Agreeableness
- PIONEERING: will correlate (negatively) with Neuroticism
- CHAMPIONING: will correlate positively with Extraversion, Agreeableness, and Openness
- TEACHING: will correlate negatively with Extraversion and Agreeableness

The correlations are shown in **Table 15** below. As can be seen, **Mentoring Q** did not correlate significantly with any of the Big-5 factors. We expected a small positive correlation with Agreeableness, which did not emerge. This suggests that the Mentoring Q is not associated with any particular Big-5 personality traits.

The **Pioneering Q**, as expected, exhibited a negative correlation with Neuroticism. This make sense as mobilizing a team around a mission is generally negatively impacted by anxiety and negative emotion in general, which is what Neuroticism assesses.

The **Aligning Q** did not show any significant correlations with the Big-5 personality factors. We did not predict any correlations in particular and these results suggest that Aligning is not associated with any of the Big-5 personality traits. However, further research may reveal some associations.

The **Championing Q** correlated positively, as expected, with Extraversion, Agreeableness and Openness. This corroborates the Championing construct in suggesting that inspiring and connecting people to a cause is associated with being more extraverted, getting along with others, and being open to new ideas. Championing also correlated negatively with Neuroticism. This makes conceptual sense that inspiring others is inversely related to anxiety and negative emotion.

The **Teaching Q** exhibited negative correlations with Extraversion and Agreeableness, as expected. People who are oriented toward helping team members improve and learn tend to be more introverted and less socially agreeable. Teaching also correlated positively with Neuroticism and negatively with Openness. Those oriented toward improvement and learning are more likely to exhibit some anxiety and less likely to be open to new ideas. These characteristics generally fit with the Teaching Quotient.

In sum, the correlations between MPACT and the Big-5 personality factors provide empirical support for the construct validity of MPACT.

### TABLE 15: CORRELATIONS WITH BIG 5 PERSONALITY FACTORS

| | MPACT | | | | |
|---|---|---|---|---|---|
| **MCORE** | **(M)entoring** | **(P)ioneering** | **(A)ligning** | **(C)hampioning** | **(T)eaching** |
| **Extraversion** | 0.066 | 0.047 | -0.09 | .376** | -.327** |
| **Agreeableness** | 0.117 | 0.031 | -0.072 | .168* | -.223** |
| **Conscientiousness** | -0.048 | -0.01 | 0.022 | -0.111 | 0.126 |
| **Neuroticism** | -0.003 | -.173* | 0.033 | -0.127 | .212** |
| **Openness** | 0.054 | -0.05 | -0.028 | .214** | -.160* |

## CONCLUSION

In summary, the MPACT Assessment demonstrated strong reliability and validity. As additional research is conducted and revisions are made to the assessment, it should only get stronger across these measures. In addition, criterion validity for outcomes, such as employee engagement, customer satisfaction, and leadership effectiveness will be tested and validated.

## REFERENCES

[1] Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.