

This lab exercise appeared in Section XI: Personality, developed by Manyu Li, Jennifer Fayard, D. Lisa Cothran, & Lyra Stein, in Promoting psychological science: A Compendium of laboratory exercises for teachers of high school psychology (Miller, 2018). This exercise is provided here with permission from the editor.

Lab Title: Traits

Section 1: Performance Expectations

What will the student be asked to do?

- Formulate a scientific question about personality assessment
- Take 2 different personality assessments that address traits and typology and think about the validity and reliability of these measures.
- Communicate information in a written report

Main Idea/Concept Demonstrated or Taught by Lab:

This lab allows all students to think about the conceptual difference between traits and typology. The Five-Factor personality assessment (Big-Five) has underlying factors that are consistent with the lexical hypothesis: personality characteristics that are most important in peoples' lives will eventually become a part of their language. The factors of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience are theoretically based personality questionnaires which supports the comprehensiveness of the model and its applicability across observers and cultures. These factors have been found cross-culturally, however openness to experience is the least defined across cultures (McCrae & Costa, 1987).

The Myers-Briggs type indicator is based on Jung's (1923) theory of type (Briggs & Myers, 1976). This assessment measures dichotomous preferences or qualitatively distinct types. Individuals are characterized as either as extraverted (E) or introverted (I), sensing (S) or intuitive (N), thinking (T) or feeling (F), and judging (J) or perceiving (P). Combinations of the four preferences determine personality types. Everyone is classified in terms of one of 16 possible four-letter codes (such as ESFJ, ENFP, INTP, and ISFJ). This assessment is used in education, business and for career counseling, however, the instrument's popularity is not consistent with research evidence. Reliance on dichotomous scores, rather than continuous scores, restricts the level of statistical analysis and limits the assessment psychometrically (Boyle, 1995).

After concluding this lab, students should be able to:

- Describe the difference between traits and types
- Describe how personality assessments measure dispositional aspects of the individual
- Understand validity and reliability in terms of personality assessment
- Understand the need to differentiate between scientific and pseudoscientific assessments of personality

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Key Terms and Psychologists Associated with Main Idea/Concept:

Traits, types, dispositions, individual differences, Big-Five personality assessment, extraversion, agreeableness, conscientiousness, neuroticism, openness to experience, validity, reliability

Instructions:

Have students take the following assessments.

1. IPIP-NEO

1. Go to <http://www.personal.psu.edu/faculty/j/5/j5j/IPIP/>
2. Click "Follow this link if you wish to complete the original IPIP-NEO"
3. Go to the 4th "bulleted" line on the page and click "take the shorter version"
4. Click "yes" to both queries on the page that comes up, go to the bottom of the page and click SEND. That will activate the first 60 items of the test.
5. Have students look over their results and think about how accurately the results describe their personality.

II. Jung Typology Test

1. Go to <http://www.humanmetrics.com/cgi-win/jtypes2.asp>
2. Have students complete the 64 items.
3. Have students look over their results and think about how accurately the results describe their personality

Follow-up and Discussion:

- Ask students to identify the differences between the two assessments and think about the accuracy of the assessments
- As they discuss their personality results, help students identify issues with the validity and reliability of typology. Whereas the Big-Five assessment places individuals on a continuum for each trait, typology places them into a discrete category.
- Discuss issues of reliability and validity. For example, if an individual scores toward the middle on introversion, they are placed in the same group as an individual who scores high on introversion. If they take the assessment again and the score varies slightly, they may end up in

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a different dichotomous type.

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What are some commonly held student ideas (both troublesome and helpful) about this topic? How could instruction build on them?

- Many personality assessments may give a general response which can apply to anyone. This is called the Barnum effect and usually the basis for horoscopes.
- Personality assessments do not predict behavior in every situation. For instance, an individual who scores toward the introversion end may be sociable and gregarious at times. Traits predict the aggregation of behaviors.

What prior concepts do students need to learn to understand the core ideas? What level of abstraction is expected of them?

- They will need to understand the difference between dimensional and categorical assessments
- Students would benefit from understanding the difference between reliability and validity

What representations or media help students make sense of core ideas?

- <https://www.youtube.com/watch?v=qPCsCiOqmXA> illustration of the Barnum effect

What practices could students engage in to explore phenomena and/or representations of this concept?

- Students could ask others, to whom they are close, about the accuracy of the results. Other people who know the individual well should have a good concept of their personality, possibly even better than the individual themselves.
- Students can think about how accurate the results are by keeping note of their choices over the next week to determine predictive validity (introverts may choose more time alone, etc.)

Section 2: Crosscutting Concepts

Select at Least One

- Students will identify the predictive validity of traits. Are they a good predictor of aggregate behavior?
- Students should think about the dispositional nature of traits. If these traits can be found cross-culturally, does this mean they have a biological basis?

Section 3: Lab Report (written, verbal, or recorded)

Suggested Content to be Included in Student Report:

- Students will summarize their findings in either a written report or a verbal presentation that includes the following
- Background information on traits and types

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- Objectives of this study
- Questions that were answered
- Hypothesis on the accuracy of traits and types
- Procedures
- Findings – Did the results describe them accurately?
- Discussion tied to reliability and validity
- Discussion of surprises or new understanding concerning personality assessment

References

Boyle, G. J. (1995). Myers-Briggs Type Indicator (MBTI): Some Psychometric Limitations. *Australian Psychologist*, 30(1), 71-74.

Jung, C. G. (1923). Psychological types: or the psychology of individuation.

McCrae, R. R., & Costa, P. T. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, 52(1), 81.

Briggs, K. C. and Myers, I. B. (1976). *Myers-Briggs Type Indicator: Form F*. Palo Alto, CA: Consulting Psychologists Press